

Bayer

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March 1, 2013

SUPERFUND DIV.
REMEDIAL BRANCH
(6SF-R)

VIA OVERNIGHT DELIVERY

Mr. Lance Nixon, Enforcement Officer
Superfund Enforcement Assessment Section (68F-TE)
US EPA, Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

Chintan K. Amin
Senior Counsel
Corporate Law

**Re: Cedar Chemical Corporation Superfund Site
West Helena, Phillips County Arkansas – SSID No. 06NH
January 14, 2013 CERCLA Section 104(e) Information Request**

Dear Mr. Nixon:

We are responding to the referenced letter, which Bayer CropScience LP ("BCS") received on January 22, 2013, and subsequently by me (the "Information Request"). On January 31, 2013, Mr. Marvin Benton, Sr. Staff Attorney for EPA, granted an extension to BCS allowing it to respond on or before March 1, 2013. BCS sets forth its responses to the Information Request related to the above-referenced NPL Site (the "Site") below:

Bayer Corporation
100 Bayer Road, Building 5,
Ground Floor
Pittsburgh, PA 15205-9741

Phone: 412 777-2715
Fax: 412 777-4740
chintan.amin.b@bayer.com

Preliminary Statement

BCS is willing to work with USEPA to provide it with information to the extent that it is relevant and reasonably obtained, subject to the following objections. (the "General Objections"):

A. BCS asserts all applicable privileges and protections it has with regard to USEPA's enumerated inquiries including the attorney-client privilege, the attorney work product doctrine, materials generated in anticipation of litigation, and privileges for materials which are proprietary, company confidential, or trade secret. CERCLA does not require a party to divulge such information in response to information requests;

B. BCS objects to the requests on the grounds that the requests use undefined terms and are overbroad, vague, ambiguous, irrelevant and unduly burdensome so as to exceed statutory authority under CERCLA and contravene BCS's constitutional rights. In responding to these requests, BCS relies on the definition of these terms as they are commonly used (i.e., their dictionary definitions);

C. BCS objects to the requests on the grounds that the requests are overbroad and unduly burdensome in that they seek information about a

Site that BCS neither owned nor operated. As such each of these requests exceeds USEPA's statutory authority under CERCLA and contravenes BCS's rights;

D. BCS objects to any requirement to produce documents or information already in the possession of a government agency, or already in the public domain. Such requirement is duplicative and, therefore, unduly burdensome;

E. BCS hereby disavows any obligation to supplement these responses on an ongoing basis. CERCLA Section 104(e)(2) authorizes USEPA to require submission of information upon reasonable notice. BCS conducted a review of available records that was practicable given the time period BCS had to respond to this request and has supplied information concerning the facilities which was found during that review. If more information is desired, BCS respectfully requests further reasonable notice that such information is desired;

F. BCS objects to the requests to the extent they call for BCS to make a legal conclusion concerning BCS's potential liability under CERCLA for the Site, which liability is not admitted but is expressly denied;

G. BCS objects to the requests to the extent they seek trade secrets or other confidential business information; and

H. Notwithstanding and without waiving these objections, and subject to them, BCS has prepared this response based upon the information available to it. Where the requests are considered vague, ambiguous, overbroad, unduly burdensome, or beyond the scope of USEPA's authority pursuant to Section 104(e) of CERCLA, BCS is making appropriate and reasonable efforts to provide responsive information based on BCS's interpretation of the requests. To the extent that information submitted herein is not required by law or is otherwise outside the scope of USEPA's 104(e) authority, that information is voluntarily submitted. BCS waives no rights or protection as to information it voluntarily submits.

Bayer CropScience LP's Responses

Without waiving any of the foregoing General Objections, BCS answers as follows:

- 1. Please provide the full legal name, mailing address, and phone number of the Respondent.**

Bayer CropScience Inc.
2 TW Alexander Drive
Research Triangle Park, NC 27709

2. For each person answering these questions on behalf of the Respondent provide full name, title, business address, and business telephone and fax number.

Chintan Amin
Sr. Counsel
Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205
Tel: +1 412 777 2715

Leslie Pegram
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Bayer CropScience LP
2 TW Alexander Drive
Research Triangle Park, NC 27709
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Mike Cockrill
VP of Supply Chain
Bayer CropScience LP
2 TW Alexander Drive
Research Triangle Park, NC 27709
Tel: + 1 919 549 2413
Fax: +1 919 549 2500

3. If the respondent wishes to designate an individual for all future correspondence concerning this Site, including legal notices, please provide the individual's name, address, telephone number, and fax number.

Chintan K. Amin
Sr. Counsel
Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15241
412-777-2715
chintan.amin@bayer.com

4. Please explain the business relationship between your company and Cedar Chemical Corporation.

Based upon available documents and interviews with employees with knowledge, Cedar Chemical was a contract manufacturer of at least one active ingredient for Aventis CropScience Inc. ("ACS") and Rhône-Poulenc Ag Company, Inc. ("R-P"). Upon information and belief, this relationship began in 1997. Further to this arrangement, it appears that

R-P agreed to supply certain quantities of Ethephon to Micro Flo Company by assuming an Ethephon Supply Agreement dated January 1, 1996 between Micro Flo Company and Cedar Chemical Corporation. It appears that the relationship between Cedar and ACS, which succeeded R-P, ceased in approximately 2001 or 2002. ACS and R-P are predecessors to Bayer CropScience Inc. by name change.

Further, it appears that Cedar Chemical Corporation purchased certain raw materials from Bayer Corporation as inputs into its chemical production operations. At the time, Bayer Corporation was not related to either ACS or R-P.

5. Identify all transactions with the Site owners and/or operators of the Site that resulted in materials being sent to the Site by you for any purpose. Identify and provide all documents related to each transaction, including but not limited to invoices, manifests, shipping papers, bills of lading, receipts, log book entries, trip tickets, work orders, contracts documents showing the nature of the materials involved, and any EPA and/or State environmental filings or correspondence. For each transaction, identify and state:

- a. The type and purpose for the transaction;**
- b. A description of the materials involved, including their quantity and chemical content and characteristics;**
- c. Any amounts paid by you in connection with each transaction;**
- d. The date of each transaction; and**
- e. The date the materials were sent to the Site.**

BCS objects to this request on the grounds that it is overbroad, vague, ambiguous, irrelevant and unduly burdensome so as to exceed statutory authority under CERCLA and contravene BCS's constitutional rights. Without waiving the foregoing objections and the General Objections, BCS has conducted a reasonably diligent review of its files, and attaches documents that are relevant, responsive and non-privileged.

6. Provide a copy of the tolling agreement between your company and Cedar Chemical, including any restatements, amendments, or other documents. If there are any other tolling agreements, or joint operating agreements, with other companies, provide copies of such agreements.

Without waiving the General Objections, BCS has conducted a reasonably diligent review of its files, and attaches documents that are relevant, responsive and non-privileged. Other than the tolling or

contract manufacturing relationship described above, BCS cannot speculate about the relationships between Cedar Chemical Corporation and any other company.

7. Identify all persons, including you, who may have arranged to have the raw materials mixed at Cedar Chemical Inc. In addition identify the owner of the hazardous materials involved in each such arrangement.

BCS objects to this request on the grounds that it is overbroad, vague, ambiguous, irrelevant and unduly burdensome so as to exceed statutory authority under CERCLA and contravene BCS's constitutional rights. Without waiving this objection and its General Objections, other than the tolling or contract manufacturing relationship described above, BCS cannot speculate about the relationships between Cedar Chemical Corporation and any other company.

8. If any of the documents solicited in this information request are no longer available, please indicate the reason why they are no longer available.

BCS maintains a document retention policy pursuant to which some potentially responsive documents may have been destroyed.

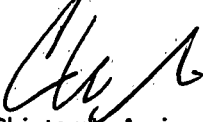
Additionally, while BCS has made a reasonable effort to retrieve certain documents, we are experiencing technical difficulties with certain electronic files. We will continue to make efforts to recover these files and supplement this response with hard copies as soon as practicable. However, we may provide you with electronic files if these efforts are not successful within a reasonable amount of time. The documents affected are as follows:

Document ID	Document Title	Number of Pages
AB0000006068	Bayer Corporation - Cedar Chemical - Manufacturing Drawback Entry Certificate - 3,4 Dichloroaniline	128
AB0000029050	Rhone Poulenc - Safety Data Sheet - Dichloro-2,4 Aniline	10
AB0000008570	Straight Bill of Lading - Short Form - DCA, Sulfuric Acid, Dichlorobenzene, Methanol, 3,4-DCA, Diuron, Phosphorus Trichloride, Propanil, Tromethamine, Telene Rim Polymers, Ethylene Dichloride, etc.	1413
AB0000032828	Cedar Chemical - Bills of Lading; Gilscot Guidroz - Propanil 4, Propanil 36%, Propanil Technical; Blackhawk - Propanil 36%, Propanil 4, Ricesolo; DHL Terminal - Propanil Technical;	182

	Bernuth Lines - Propanil 36%, Propanil 4; Riceco - Propanil 4; Farm Services - Propanil 4	
AB0000076654	Cedar Chemical Corporation West Helena Plant Monthly Financial Review Report for the Month Ending December 31, 2000	384
AB0000032072	Cedar Chemical - Bills of Lading; DSI - Dichlorophenyl Isocyanates; Mobile Process - Spent Beds; Cymetech - Kerosene, Dicyclopentadiene; Blackhawk - Propanil Technical, Telene Rim Polymers, Diuron; Miller Terminal - Methanol, Nitric Acid; BFI - RCRA Empty Containers; Matlack Terminal - Dicyclopentadiene, R118118, Stam M-4; Queen City Barrel - Drums (Dicyclopentadiene); Albemarle - Aluminum Alkyl Halides; Sygenta - Ordram Technical; Reverse Route - Ortho Dichlorobenzene, Acetic Anhydride; Cypress Chemical - Sulfuric Acid; Rineco - Dichloroanilines, Methanol, Xylene, Maleic Anhydride, DCPD, CPD, Heptane, Kerosene; Cedar Chemical - 3,4-DCA, Tromethamine; Gilscot Guidroz - Dichlorophenyl Isocyanates; Rohn & Haas - Stam M-4 Herbicide; Morton International - 3,4-DCA; Boasso - Tromethamine; Sigma Chemical - Tromethamine; Ashland Distributing - Heptane, Polybutadiene; Drexel Chemical - Diuron; Trash Hunters - Cut up hoses from Bldg. 5	594

Please contact me if you have any questions or concerns.

Sincerely,

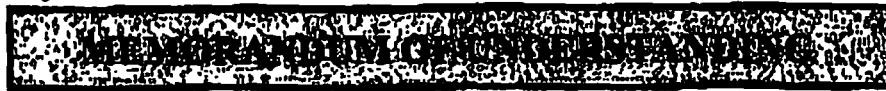


Chintan K. Amin
Sr. Counsel
Bayer Corporation

Enclosures

cc: Mr. Robert Lockemer
Ms. Leslie Pegram

File Cjolo Analido



THIS MEMORANDUM OF UNDERSTANDING is made and entered into as of the date last below written, by and between

Cedar Chemical Corporation, a Delaware corporation, having its principal place of business at Suite 2414 Clark Tower, 5100 Poplar Avenue, Memphis, Tennessee 38137 (hereinafter referred to as "CEDAR"),

and

Rhône-Poulenc Agro Matières Actives, a French "société en nom collectif" having its registered office at 14/20, rue Pierre Balzet -69009 LYON-France (hereinafter referred to as "Rhône-Poulenc,"

Witnesseth:

- ◆ WHEREAS, Rhône-Poulenc desires to retain an independent third party contractor to toll manufacture for it Cyclanilide (1-(2,4-dichlorophenyliminocarbonyl)-cyclopropane carboxylic acid) (hereinafter "Product") from 2,4 DCA (2,4 Dichloro aniline) (hereinafter "DCA") and (cyclopropane- 1,1-dicarboxylic acid dimethyl ether (CPDM) (hereinafter "CPDM"), DCA and CPDM together with Sodium Methoxide (hereinafter "NaMO") being sometimes referred collectively herein as the "Raw Materials"; and
- ◆ WHEREAS, CEDAR owns and operates a chemical manufacturing facility located at West Helena, Arkansas which, following installation of certain capital improvements and equipment estimated to cost approximately \$750,000 (the "Capital Improvements"), is deemed capable of producing Product from DCA and CPDM utilizing Rhône-Poulenc's manufacturing process (the "Process") disclosed by Rhône-Poulenc to Cedar pursuant to a Secrecy Agreement between Rhône-Poulenc and Cedar dated as of May 14, 1999 (the "Secrecy Agreement"); and processes disclosed to Cedar pursuant to a Secrecy Agreement between Rhône-Poulenc and Cedar dated as of November 22, 1999 (the "Degussa Secrecy Agreement").
- ◆ WHEREAS, it is agreed that CEDAR and Rhône-Poulenc shall promptly commence negotiations with each other in good faith with the intent of reaching

an agreement (the "Agreement") satisfactory in form and substance to their respective managements and incorporating the terms and principles set forth herein.

NOW, THEREFORE, in consideration of the premises and the terms and conditions herein contained, the Parties agree as follows:

Article 1 - Purpose. The purpose of this Memorandum of Understanding is to set forth the terms and principles under which the parties will negotiate in good faith with the objective of entering into a toll manufacturing and supply Agreement whereby Cedar will produce Product for Rhone-Poulenc, and under which Cedar will initiate engineering studies and make equipment purchase commitments to enable it to construct and complete the Capital Improvements in time to begin producing Product for Rhone-Poulenc in the fourth quarter of the year 2000 in the quantities and in accordance with the terms and conditions set forth herein.

Article 2 - Agreement. The parties intend to negotiate in good faith with the objective of entering into an Agreement which will include among other terms, the following provisions:

A. **Term.** The initial term shall be from the date of execution of the Agreement through December 31, 2003, consisting of an initial partial year period (the "Partial Year Period") and three (3) contract years (the "Contract Years"). The Partial Year Period shall be from the effective date of the Agreement through December 31, 2000, the first Contract Year (the "First Contract Year") shall be from January 1, 2001 through December 31, 2001, the second Contract Year (the "Second Contract Year") shall be from January 1, 2002 through December 31, 2002, and the last Contract Year (the "Last Contract Year") of the initial term shall be the period from January 1, 2003 through December 31, 2003. Thereafter, the term of the Agreement shall be renewed for successive two year periods unless terminated by either party upon notice to the other not less than one (1) year prior to the end of the initial term or one year prior to the end of any extension of the initial term of Agreement; provided that the Agreement shall not be so extended unless, prior to the end of the initial term or of any extended term, the parties will have negotiated and reached mutual agreement in respect of the terms of such extension (including the price and quantity).

B. **Raw Materials.** Rhone-Poulenc shall be responsible for supplying Cedar, at its cost, the Raw Materials in sufficient quantities to enable Cedar to produce, in continuous campaigns, scheduled in accordance with the provisions of Article 2D, all quantities of Product ordered by Rhone-Poulenc, provided that in the event Cedar is able to obtain a more favorable price than Rhone-Poulenc for purchase of NaMO, following prior approval from Rhone-Poulenc, Cedar shall purchase such

quantities of NaMO as shall be required for it to perform hereunder, but for the account of Rhone-Poulenc. Cedar shall supply, at its cost, all raw materials other than the Raw Materials and Rhone-Poulenc shall reimburse Cedar its actual cost for the purchase of such raw material within thirty (30) days following the date of Cedar's invoice, provided that Cedar shall in all cases employ a reasonable competitive purchasing process.

C. **Product.** Rhone-Poulenc shall order and Cedar shall produce from Raw Materials supplied by Rhone-Poulenc not less than four hundred twenty (420) metric tons of Product during the initial term of this Agreement. Not less than eighty (80) metric tons of Product shall be produced by Cedar for Rhone-Poulenc during the Partial Year Period. Rhone-Poulenc currently estimates that it will order approximately one hundred sixty (160) metric tons of Product during the First Contract Year. In the event Rhone-Poulenc shall not have ordered and purchased from Cedar at least four hundred twenty (420) metric tons of Product by the end of the Second Contract Year, subject to the terms hereof, it shall order the balance of its four hundred twenty (420) metric ton commitment from Cedar for production during the Last Contract Year.

D. **Scheduling.** Rhone-Poulenc shall submit its good faith estimate of its orders for Product to be produced by Cedar in each calendar year during the term hereof by no later than July 1 of the previous calendar year, provided that such estimate will be for the purpose of facilitating scheduling of manufacture only and will not be binding, provided that a firm order will be issued by Rhone-Poulenc by October 31 of such year. The quantity of Product to be produced by Cedar in the Partial Year Period, as specified in Paragraph C, shall be considered a firm order, provided that, if Rhone-Poulenc is not able to import sufficient quantities of Raw Materials in the United States for reasons beyond Rhone-Poulenc's control, Rhone-Poulenc shall have no minimum volume commitment for the Partial Year Period. Except for Product to be produced during the Partial Year Period, no production campaign scheduled by the parties in any Contract Year, shall be for less than one hundred fifty (150) metric tons, and only one production campaign shall be scheduled in each Contract Year. If Rhone-Poulenc fails to issue a firm order for at least one hundred fifty (150) metric tons of Product for production by Cedar in any Contract Year, Cedar will be relieved of any responsibility to produce Product for Rhone-Poulenc during such Contract Year, and shall have unrestricted use of its manufacturing facility, including the Capital Improvements, during such Contract Year.

E. **Raw Material Usage.** Maximum usage factors applicable to consumption of Raw Materials (expressed in kilograms of Raw Materials consumed per kilogram of Product) shall be determined based on actual results achieved during the production of the initial eighty (80) metric tons of Product during the Partial Contract

Year. Thereafter, any over-consumption of Raw Materials (of more than 3.5%) shall be for Cedar's account. The savings on any under-consumption of Raw Materials of more than 3.5% shall be shared equally by the parties.

F. **Capital Improvements.** Cedar's cost of Capital Improvements shall be amortized over the minimum four hundred twenty (420) metric tons of Product to be produced by Cedar and paid for by Rhone-Poulenc during the initial term of the Agreement. For example, if the agreed cost of the Capital Improvements for which Rhone-Poulenc shall be responsible is \$750,000.00, \$1.79 for each kilogram of Product purchased by Rhone-Poulenc from Cedar hereunder shall be credited to Rhone-Poulenc's obligation to reimburse Cedar's cost of Capital Improvements. The foregoing notwithstanding, Rhone-Poulenc shall in any event be responsible for reimbursing Cedar at least twenty percent (20%) of its cost of Capital Improvements by the December 31, 2001; an additional forty percent (40%) of its cost of Capital Improvements by December 31, 2002; and the balance of its costs of Capital Improvements by December 31, 2003.

G. **Startup.** Rhone-Poulenc shall provide reasonable technical assistance to Cedar during startup of the initial campaign.

H. **Waste Disposal.** The parties shall cooperate to determine the most cost effective and environmentally sound method to dispose of wastes generated by production of Product. Costs of waste disposal shall be for Rhone-Poulenc's account, provided that the cost of the waste disposal charge to Rhone-Poulenc shall not exceed a mutually agreed amount per kilogram of Product which will be determined by the parties prior to execution of the Agreement.

I. **Toll Fees.** Cedar's toll manufacturing fees for production of Product for Rhone-Poulenc during the initial term shall be \$8.00 per kilogram for all Product order for production beginning in the Partial Year Period. Thereafter, Cedar's toll manufacturing fees for Product order by Rhone-Poulenc in a Contract Year shall be (i) \$7.00 per kilogram if Rhone-Poulenc orders and purchases from Cedar between one hundred fifty (150) metric tons and two hundred (200) metric tons of Product during such Contract Year; and (ii) \$6.50 per kilogram if Rhone-Poulenc orders and purchases from Cedar more than two hundred (200) metric tons during such Contract Year. The parties shall agree on an escalation formula by which the fees set forth above (which fees include amounts relating to the depreciation of the Capital Improvements referred to in Article 2(F) above) may be adjusted annually starting with the Second Contract Year to reflect increases in manufacturing costs. Cedar shall invoice Rhone-Poulenc at the end of each month during the term of the Agreement for all quantities of Product produced during such month, at the applicable toll manufacturing fee, and for all raw materials (including NaMO) purchased by Cedar hereunder. Such invoices shall be due and payable by Rhone-Poulenc thirty (30) days from date of invoice.

J. **Miscellaneous**. The Agreement shall contain additional terms and provisions normally contained in agreements of this nature.

Article 3 - Schedule of Target Dates.

A. It is the parties' objective that on or before March 15, 2000, Cedar shall submit to Rhone-Poulenc detailed engineering drawings describing the Capital Improvements, and its final estimated cost to install the Capital Improvements and Rhone-Poulenc shall have delivered to Cedar its detailed specifications for Product and Raw Materials.

B. The parties to agree to work together with the goal of reaching, on or before March 15, 2000, final agreement concerning the documents describing the Capital Improvements, including the agreed cost of same to be amortized over the initial term of Agreement. The parties shall also work together with the objective of reaching written agreement as to the Product and Raw Material specifications. Once mutually agreed upon, such documents will be used as Exhibits to the Agreement. The Capital Improvements documents shall include a schedule of the costs incurred and to be incurred by Cedar while negotiation of the Agreement is pending. All such costs and contractual commitments incurred by Cedar as set out in such schedule of costs shall be for Rhone-Poulenc's account, either for amortization and reimbursement in accordance with the provisions of Article 2F hereinabove, or, alternatively, in the event that, following good faith negotiations, either party determines that it cannot reach agreement with the other party on the terms of the Agreement, or in any event the Agreement is not executed by the parties on or before May 1, 2000, or, if the Agreement is executed by the parties, but is subsequently terminated for reasons other than for default by Cedar prior to the end of the initial term, such costs (to the extent incurred by Cedar and unamortized) shall be paid in full by Rhone-Poulenc to Cedar upon the occurrence of any such event.

C. On or before April 1, 2000, Rhone-Poulenc shall prepare and deliver to Cedar a proposed first draft of the Agreement.

D. The parties will work together with the objective of submitting a final draft of the Agreement prior to their respective managements for approval on or before May 1, 2000.

Article 4 - Nature of Agreement. The provisions of this Memorandum of Understanding do not constitute and will not give rise to any legally binding obligation on the part of each of the parties except in respect to Articles 3.B, 5 and 6, which the parties intend to be binding.

Article 5 - Confidentiality. The parties hereby agree that any information exchanged pursuant hereto shall be subject to the provisions of the Secrecy Agreement and shall be considered "Confidential Information" as such term is defined in the Secrecy Agreement, provided that: (i) the parties hereby agree to extend the term of the Secrecy Agreement until December 31, 2000 and (ii) any information exchanged pursuant hereto which would constitute Degussa-Huls Confidential Information as such term is defined in the Degussa Secrecy Agreement, shall be subject to the Degussa Secrecy Agreement

Article 6 - Dispute Resolution. Applicable Law. All disputes arising in connection with the present Memorandum of Understanding shall be finally settled under the rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules.

The arbitration shall be conducted in the English Language in New York City.

This Memorandum of Understanding shall be construed in accordance with and governed by the laws of the State of New York.

Executed by the parties, acting by and through their authorized representatives, as of the dates appearing below.

CEDAR CHEMICAL CORPORATION

By: _____

Date: _____

RHÔNE-POULENC AGRO MATIÈRES ACTIVES

By: _____

Date: _____

EN
8/22/86

CONTRACT FILE

BUTOXONE ACQUISITION

RHONE-POULENC INC - Agreement
effective January 1, 1983 (closing
date March 21, 1983).

VERTAC CHEMICAL CORPORATION

CONTRACT FILE - OUT SHEET

Rhone-Poulenc - Butoxone Acq.
Agmt.

[illegible]

DEADLINES, ETC.

VERTAC/RHONE-POULENC INC CONTRACT

Effective January 1, 1983,

<u>Date</u>	<u>Item</u>
March 21, 1983	Date of closing.
April 21, 1983	Deadline for delivery of files, records, etc., by Rhone-Poulenc to Vertac
	and
	Deadline for Vertac to inspect and inventory closing inventories and to notify Rhone-Poulenc of any defects or discrepancies.

Remaining Payments Due to Rhone-Poulenc

June 30, 1983	\$179,467.13 (for inventories)
July 31, 1983	\$304,467.13 (final payment)
January 1, 1986, and every 12 months thereafter to and including January 31, 1990	5% of Vertac's net sales of 2,4-DB end use product (f.o.b. manufacturer's plant) in the prior calendar years (1985-1989) - (for assets other than inventories)

Formulation Agreement

April 1, 1983, and first day of each calendar quarter thereafter	Vertac gives estimates of requirements of end use products (work orders on 10 days prior notice to Rhone-Poulenc)
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(NOTE: Terms of Formulation Agreement should be renegotiated effective August 1, 1983, if Vertac expects to rely on Rhone-Poulenc for formulation services thereafter, since Rhone-Poulenc has the right to close its plant after July 31, 1983, with no notice to Vertac.)

Formulation Fees

<u>Date</u>	<u>Item</u>
Payable 30 days after production or delivery date specified in Vertac work order.	
March 1, 1984	Rhone-Poulenc to notify Vertac of adjustments based on PPI increase or decrease.
July 31, 1990	Termination of all warranties and covenants except Rhone-Poulenc's covenant not to compete.
January 31, 1992	Termination of Rhone-Poulenc's covenant not to complete.

AGREEMENT

THIS AGREEMENT dated as of and effective the 1st day of January, 1983 by and between RHONE-POULENC, INC. a New York corporation (hereinafter called "R-P") and VERTAC CHEMICAL CORPORATION, a Delaware corporation (hereinafter called "Vertac").

WHEREAS, R-P desires to sell and Vertac desires to purchase all of R-P's assets associated with the manufacture, sale and use of herbicides containing 4-(2,4-Dichlorophenoxy) butyric acid ("2,4-DB") including salts and esters of 2,4-DB, but excluding R-P's manufacturing facilities (plant, property and equipment) and its accounts receivable;

NOW, THEREFORE, in consideration of the premises and the mutual covenants and agreements set forth herein, the parties agree as follows:

ARTICLE I. ASSETS BEING SOLD

1.1 Definitions. Subject to the terms and conditions of this Agreement, at the closing referred to herein (the "Closing") R-P shall sell, convey, assign, transfer and deliver to Vertac all right, title and interest in and to those assets owned by it and used or suitable for use in connection with the manufacturing, marketing, distribution, sale and use of 2,4-DB herbicide products, but excluding the equipment and related manufacturing facilities where R-P has heretofore manufactured, formulated, packaged and stored such products, and excluding R-P's accounts receivable from sales of such products prior to the date of Closing, such assets to be purchased and sold hereunder being

B. RMW

hereinafter collectively referred to as the "Assets", including specifically the following:

(a) The EPA and state pesticide registrations for all of R-P's technical products and end-use formulations containing the active ingredient 2,4-DB or the salts or esters thereof (hereinafter collectively the "Products") such registrations being identified or described in Exhibit "A" (the "Registrations") attached hereto.

(b) All scientific data, including toxicity, efficacy and other data developed by or for R-P for the purpose of supporting the Registrations including but not limited to such data heretofore submitted to EPA or any other governmental agency in the United States, as more particularly described in Exhibit "B" attached hereto (the "Registration Data"), together with all rights heretofore or hereafter accrued or accruing in connection therewith.

(c) The United States trademarks "Butoxone" and "Butoxone SB" identified in Exhibit "C" (the "Trademarks"), together with the goodwill and contract rights associated therewith.

(d) All confidential statements of formula, formulation recipes, manufacturing procedures, analytical specifications and methods, safety information and all manuals and related documents associated with the manufacture, formulation and packaging of Products (the "Manufacturing and Formulation Data").

(e) All research and engineering files, summaries and reports relating to the manufacture and uses of 2,4-DB (the "Process Data"), including but not limited to the information identified in Exhibit "D". *BRM*

(f) A current list of R-P's customers for the Products including the volumes purchased by each such customer, and all related customer files, for each of the calendar years 1980, 1981 and 1982 and for the current year to date (the "Customer Data").

(g) All of R-P's inventories of end-use Products in bulk and packaged in containers and labeled under EPA Registration Nos. 359-677, 359-358, 359-409, and 359-502, and all inventories of 2,4-DB and isooctyl ester and butyl ester of 2,4-DB as shall be on hand as of Closing (collectively the "Closing Inventories"). Attached hereto as Exhibit "E-1" is a schedule of R-P's Closing Inventories by quantity and location and costs per unit, and, as Exhibit "E-2", a schedule of R-P's sales of end-use Products from January 1, 1983 to date of Closing.

ARTICLE II. PRICE AND TERMS

2.1 Inventories. Subject to the terms and conditions of this Agreement and in reliance upon R-P's representations, warranties and agreements contained herein, Vertac shall pay R-P for the Closing Inventories purchased by Vertac hereunder, a total purchase price of Six Hundred Eight Thousand Nine Hundred Thirty-Four and 26/100 Dollars (\$608,934.26), determined and payable as follows:

(a) The total purchase price for the Closing Inventories purchased and sold hereunder has been determined as follows:

(i) Quantities of the Closing Inventories at the costs per unit scheduled in Exhibit "E-1" attached hereto; plus *RMV*

(ii) The total quantities of end-use Products sold by R-P between January 1, 1983 and the date of Closing at the aforesaid costs per unit; minus

(iii) Ninety-seven percent (97%) of the net sales prices (FOB R-P's plant) received or receivable by R-P as a result of such sales of end-use Products, all as disclosed in Exhibit "E-2".

(b) The total purchase price for Closing Inventories purchased and sold hereunder, as determined above, shall be due and payable by Vertac as follows:

(i) At Closing - One Hundred Twenty-Five Thousand Dollars (\$125,000.00), by certified check.

(ii) On or before June 30, 1983 - One Hundred Seventy-Nine Thousand Four Hundred Sixty-Seven and 13/100 Dollars (\$179,467.13) (Fifty percent (50%) of the total purchase price, less that sum paid by Vertac at Closing for Closing Inventories) by wire transfer to a bank to be designated by R-P.

(iii) On or before July 31, 1983 - The balance of the total purchase price for Closing Inventories purchased and sold hereunder, by wire transfer to a bank to be designated by R-P.

(c) Title to and risk of loss of all Closing Inventories shall pass to Vertac at the Closing. Closing Inventories located at R-P's plants or warehouses shall remain at such locations until July 31, 1983 at no charge to Vertac, and R-P shall tender such Inventories purchased by Vertac hereunder for shipment by common carrier at Vertac's expense from time to time

BRM

after Closing as directed by Vertac. Vertac shall be responsible for storage charges with respect to Closing Inventories located at warehouses not owned by R-P from and after April 1, 1983. After July 31, 1983, R-P will bill Vertac for storage of Closing Inventories (end-use Products only) at R-P's plant sites at a fair and reasonable rate to be negotiated by the parties.

2.2 Assets Other Than Inventories. Subject to the terms of this Agreement and in reliance upon R-P's representations, warranties and agreements contained herein and in consideration of the sale, conveyance, assignment, transfer and delivery of all Assets with the exception of the Inventories described in Section 1.1. hereof, Vertac shall pay to R-P at Closing the sum of One Hundred Thousand Dollars (\$100,000.00), plus additional sums equal to five percent (5%) of the aggregate net sales price (FOB manufacturing plant, regardless of location) received by Vertac on the sales of all end-use Products in each calendar year beginning with the calendar year 1985 and in each calendar year thereafter to and including 1989, due and payable to R-P as follows:

(a) By not later than January 31, 1986 and January 31 of each year thereafter, to and including January 31, 1990, Vertac shall submit to R-P an accounting of Vertac's net sales of end-use Products during the immediately preceding calendar year, accompanied by payment due to R-P, determined in accordance with section 2.2 hereof.

(b) Vertac shall keep books and accounts or other suitable business records necessary for the computation of the

B RMV

payments due by Vertac to R-P hereunder. If R-P desires at any time to verify the computation of the payment due hereunder, Vertac shall make such records available to an independent accountant selected by R-P and reasonably acceptable to Vertac during regular business hours and upon reasonable notice.

ARTICLE III. FORMULATION AGREEMENT

3.1 Term/Requirements. From the date of Closing until July 31, 1984, R-P shall keep its formulating and packaging facilities at its plant at St. Joseph, Missouri (hereinafter the "Plant") available for the purpose of supplying Vertac with any or all of Vertac's requirements of end-use Products during the 1983 and 1984 selling seasons in accordance with the terms of this Article III. Notwithstanding the above, R-P may sell or close the Plant after July 31, 1983. In the event the Plant is closed or sold after July 31, 1983 but before July 31, 1984, R-P shall not be liable to Vertac for any damages that Vertac may incur as a result of such closing or sale.

3.2 (a) Work Orders. Beginning April 1, 1983 and on the first day of each successive calendar quarter during the term hereof, Vertac shall give R-P its best estimates of the quantities of end-use Products which Vertac will require that R-P produce during such quarter. Upon at least ten (10) days' prior written notice by Vertac to R-P during the term specified in Article 3.1 hereof, R-P shall formulate and package for Vertac end-use Products in minimum quantities of Five Thousand (5,000) gallons per order for delivery in accordance with such notices. *B RNV*

(b) The delay or failure of R-P to perform any obligation to be performed by it under 3.2(a), if caused by reason of force majeure, shall not constitute a default nor subject R-P to any liability to Vertac. The term "force majeure" shall mean any act of God or the public enemy; explosion; fires; storm; lightning; earthquake; flood; drought; strike; lockout or other labor troubles; federal, state or municipal law, regulation, order, priority requisition or allocation; or inability to acquire ingredienets or packaging materials or interruption, failure or delay of transportation for reasons beyond the reasonable control of R-P. R-P will use its best effort to correct and remove a force majeure condition which affects performance under 3.2(a).

3.3 Materials/Consumption Standards. Vertac shall supply R-P with all 2,4-DB required to produce end-use Products ordered by Vertac hereunder and R-P shall reimburse Vertac Vertac's costs of any such 2,4-DB consumed or lost in the manufacturing process in excess of the consumption ratios identified in Exhibit "F". Other materials, including inert ingredients, packaging materials and the like, shall be supplied and consumed by R-P under terms described in Exhibit "F".

3.4 Fees. Vertac shall pay to R-P for the materials supplied and its services in accordance with this Article III the fees per gallon of end-use Products determined in accordance with collective Exhibit "F".

3.5 Production Schedule/Terms of Payment. All Products produced by R-P for Vertac in accordance with this Article

B RMV

III shall be delivered or held for delivery to Vertac at the Plant not later than the date specified in Vertac's purchase order and the fees due to R-P hereunder shall be payable by Vertac within thirty (30) days thereafter.

3.6 Storage. During the term hereof, R-P shall store all 2,4-DB purchased by Vertac and delivered to the Plant and shall also store end-use Products produced by R-P in quantities up to Ten Thousand (10,000) gallons at no additional charge to Vertac. For any quantities of end-use Products stored by R-P at any time in excess of Ten Thousand (10,000) gallons, Vertac agrees to pay R-P a fair and reasonable warehouse fee.

3.7 Warranties. All Products produced by R-P for Vertac hereunder shall meet the same specifications and quality standards applicable to such Products produced by R-P from the effective date hereof to the date of Closing, and all 2,4-DB supplied by Vertac shall meet A. H. Marks' standard specifications.

ARTICLE IV. REPRESENTATIONS, WARRANTIES AND COVENANTS

4.1 R-P's Representations, Warranties and Covenants. R-P represents and warrants to Vertac as follows:

(a) R-P is a corporation duly organized, validly existing and in good standing under the laws of the State of New York and has all requisite corporate power and authority to enter into this Agreement and to carry out the transactions contemplated herein.

(b) R-P has good, valid and marketable title to the Assets and has complete and unrestricted power and the unquali-

fied right to sell, convey, assign, transfer and deliver such Assets to Vertac at the Closing hereunder. The assignments and other instruments to be executed and delivered by R-P to Vertac at the Closing will, when executed and delivered, effectively vest in Vertac good, valid and marketable title to the Assets, free and clear of any lien or encumbrance. The information and data contained in the Exhibits to this Agreement are true and correct.

(c) R-P is not aware of any condition or state of facts or circumstances which would create a risk of having a material adverse effect on the business conducted with the Assets, except as provided in Article 4.1(e). Specifically, but not by way of limitation, R-P has no knowledge ^{of ~~any~~ *RMV*} ~~or~~ any pending or threatened action by any state or federal agency which would adversely affect Vertac's ability to sell the Products, except as disclosed in 4.1(e). No representation or warranty by R-P contained in this Agreement and no statement contained in any certificate, schedule, list or other writing furnished to Vertac pursuant hereto contains any untrue statement of a material fact or omits to state a material fact necessary in order to make the statements contained herein or therein not misleading.

(d) The Closing Inventories purchased and sold hereunder meet the specifications and are fit for the purposes set forth on the labels affixed thereto, said labels being among those attached as Exhibit "A" to this Agreement.

(e) R-P has complied with all testing and reporting requirements imposed by law with respect to the Registrations;

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provided, however, it is understood that EPA has notified all registrants of products containing 2,4-DB that additional test data will be required in accordance with the terms of a notice of data call in furnished by R-P to Vertac and dated July 22, 1982. To the best of R-P's knowledge and belief, the data that will be produced in accordance with such notice will not adversely affect the registered uses of the Products as shown in the Registrations attached hereto. R-P has the complete and unrestricted right and power to transfer the Registrations to Vertac.

(f) For a term beginning with the date of Closing and ending two (2) years following the date of Vertac's final payment to R-P pursuant to Article 2.2 hereof, neither R-P nor any company controlled by R-P will compete with Vertac in the sale or resale in the United States of any of the Products which Vertac is hereby purchasing, it being agreed that competition by R-P or such company controlled by R-P during the term hereof shall constitute breach of this covenant. In addition, during said period, R-P will personally introduce Vertac to R-P's major Product customers and prepare a letter of introduction to its 2,4-DB herbicide customers immediately following Closing. R-P further agrees not to disclose to any party after March 11, 1983 any information or data contained in the Assets purchased and sold hereunder, heretofore deemed confidential by R-P, except as otherwise permitted herein or as shall be or become, through no fault of R-P, in the public domain. R-P shall assign to Vertac its rights under any secrecy agreements entered into prior to March 11, 1983 in connection with its 2,4-DB herbicide business. *B RMV*

(g) R-P is not currently bringing to market any herbicides intended to supplant the Products described in the Registrations purchased by Vertac hereunder, with the exception of acifluorfen and related herbicides.

(h) From the effective date of this Agreement to the date of Closing, R-P shall conduct its 2,4-DB business in the ordinary course, except that R-P will not process shipments of 2,4-DB for two (2) days prior to Closing.

(i) The representations and warranties of R-P contained in this Agreement shall be true and correct on and as of the date of Closing as though made on that date.

(j) Following the Closing, R-P will execute such further documents and cooperate with Vertac in such manner as shall be or become reasonably necessary to effectuate the transfer and delivery of Assets provided for herein and otherwise to carry out the intent of this Agreement.

4.2 Vertac's Representations, Warranties and Covenants.

Vertac represents to R-P as follows:

(a) Vertac is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware and has all requisite corporate power and authority to enter into this Agreement and to carry out the transactions contemplated herein.

ARTICLE V. CLOSING

5.1 Time and Place. Closing of the transactions contemplated by this Agreement shall take place on a date and place

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to be agreed upon by the parties (the "Closing Date"), but in no event later than March 21, 1983.

5.2 Closing Documents. At the Closing, R-P shall deliver to Vertac or its designated assignee one or more fully executed bills of sale, assignments and/or other instruments of conveyance in form and substance reasonably satisfactory to counsel for Vertac, transferring good and merchantable title in the Assets to Vertac, including:

(a) Letter or letters to the Environmental Protection Agency and all appropriate state agencies directing the transfer of the Registrations to Vertac.

(b) Good and sufficient assignment of the Trademark and its associated goodwill and contract rights.

(c) Bill of Sale and Assignment evidencing Vertac's ownership of the remaining Assets, including:

- (1) The Registration Data
- (2) The Manufacturing and Formulation Data.
- (3) The Process Data.
- (4) The Market Studies.
- (5) The Customer Data.
- (6) The Closing Inventories.

(d) R-P shall deliver to Vertac at its offices in Memphis, Tennessee, within thirty (30) days following the Closing, all files, records, documents and similar items comprising all of the Assets sold and delivered hereunder, including those specifically described in the Bill of Sale and Assignment referred to above.

5.3 Payment. At the Closing, Vertac shall deliver to R-P its check payable to R-P in the sum of Two Hundred Twenty-Five Thousand Dollars (\$225,000.00), by certified check. *BRM*

**ARTICLE VI. SURVIVAL OF REPRESENTATIONS, WARRANTIES
AND COVENANTS/INDEMNIFICATION**

6.1 Except as otherwise specifically provided for herein, representations, warranties and covenants of the parties contained in this Agreement shall survive the Closing for a period of seven (7) years following the date of Closing.

6.2 Each party agrees to indemnify, defend and hold the other harmless from and against all demands, claims, actions or causes of action, assessments, losses, damages, liability, costs and expenses, including without limitation, interest, penalties and attorneys fees asserted against, resulting to, imposed upon or incurred by such other party by reason of or resulting from any breach of the representations, warranties, covenants and agreements of the other party contained in this Agreement.

6.3 In no event shall R-P be liable for, and Vertac assumes the entire responsibility for, all personal injury and property damage resulting from the handling, possession, transportation, use or sale of any of the Assets after delivery of same to Vertac hereunder, except as shall arise as a result of the negligence or breach of warranty of R-P, and Vertac agrees to indemnify and hold R-P harmless from any and all liability therefor, including losses, expenses, costs and damages, including reasonable attorneys fees in connection therewith.

6.4 R-P agrees to indemnify and hold Vertac harmless from any and all liability for losses, expenses, costs and damages, including reasonable attorneys fees, arising out of the manufacture, handling, possession, transportation, use or sale of

any of the Products described herein sold by R-P prior to January 1, 1983.

ARTICLE VII. GENERAL

7.1 This Agreement and the Exhibits attached hereto or to be attached hereto contain the entire agreement between the parties with respect to the transactions contemplated herein.

7.2 This Agreement shall be governed by the laws of the State of Tennessee.

7.3 This Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective successors and assigns.

7.4 It is agreed that Vertac will purchase and R-P will convey the Assets described in Article I to Vertac, "as is" on the Closing date, except the Closing Inventories. Within thirty (30) days following Closing, Vertac shall inspect and inventory the Closing Inventories and notify R-P of any apparent defects in the condition of the containers or other physical defects which would be readily apparent upon visual inspection or mistakes in the quantities scheduled in Exhibit "E-1". In the absence of such notice by Vertac to R-P within thirty (30) days following Closing, the Closing Inventories shall be deemed accepted by Vertac "as is", subject, however, to R-P's warranty in Article 4.1(d) of this Agreement. *BRW*

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized officers as of the Effective Date first appearing above.

RHONE-POULENC, INC.

By: *Robert Weinberg*
PRESIDENT

VERTAC CHEMICAL CORPORATION

By: *C. J. Bonarje*
President

EXHIBIT A
REGISTRATIONS

Included in this exhibit are:

1. Copy of all Rhone-Poulenc 2,4-DB labels.
2. Copy of sub-registered labels.
3. List of Rhone-Poulenc's current private label customers who are sub-registered.

March 16, 1983

Rhone-Poulenc Inc.'s Current Private Label Customers For 2,4-DB

Customer	1982 label
Chem-Nut Inc. Box 3706 Albany, GA 31706 Contact: Carroll Harpole Phone: 912-833-7050	Chem-Nut 2,4-DB re Butoxone
Gold Kist Inc. 110 Smith Ave. Thomasville, GA 31792 Contact: Evelyn Buckner, Purchasing Agent Phone: 912-228-1333	Gold Kist 2,4-DB 175 re Butoxone
Helena Chemical Co. 2603 Corporate Ave., East - Suite 125 Memphis, TN 28132 Contact: Charles Blue Phone: 901-761-0050	Helena 2,4-DB re Butoxone
Red Panther Chemical Co. PO Box 550 Clarksdale, MS 38614 Contact: John Duff Phone: 601-627-4731	Red Panther 2,4-DB Re Butoxone
Riverside Chemical Co. Subsidiary of Terra Chemicals International PO Box 1828 Solix City, Iowa 51102 Contact: Ray Miller Phone: 712-277-1340	Riverside 2,4-DB 2 (re Butoxone Amine) and Riverside 2,4-DB 1.75 (re Butoxone)
USS Agri-Chemicals Div. of U.S. Steel Corp. PO Box 1685 Atlanta, GA 30301 Phone: 404-572-4352 Contact: Charles MacWilliams	USS 2,4-DB re Butoxone
Voluntary Purchasing Groups, Inc. Box 460 Bonham, TX 75418 Contact: Michael Jackson Phone: 214-583-5501	Hi-Yield 2,4-DB 2Lb. re Butoxone Amine

DCA Purchases from R-P Detail:

Date	Vendor	Inv. #	DCA		Load	ODCB Used lbs	DCA Purch lbs	Amount	Units Pr
			kg	lbs					
A/Ps R-P:									
4/27/1999	P-P	60132483	44,000	97,002				85,800.00	0.885
5/4/1999	P-P	60132668	32,000	70,547				62,400.00	0.885
A/P's Miso:									
6/30/1999	Gilscot	55268						28,118.02	
ODCB Used									
5/31/1999	ODCB Used	JV03-5-38				174,168		64,442.18	0.370
Sub Total								238,758.18	1.425
Value Transferred to Inventory:									
5/31/1999	DCA Purchased	JV03-5-55					167,549	(212,642.18)	1.269
10/31/1999	DCA Purchased	JV03-10-55						(28,118.02)	
Balances			76,000	167,550		174,168	167,549	0.00	

DCA Purchases from Biesterfield Detail:

Date	Vendor	Inv. #	DCA		Load	ODCB Used lbs	DCA Purch lbs	Amount	Units Pr
			kg	lbs					
A/Ps R-P:									
7/3/1999	Biesterfield	2533AG221	12,000	26,455				36,600.00	1.383
A/P's Misc:									
8/24/1999	Gilscot	55412						5,709.02	
9/30/1999	Gilscot	55412						140.00	
Sub Total								42,449.02	1.605
Value Transferred to Inventory:									
8/31/1999	DCA Purchased	JV03-8-55					26,455	(26,984.10)	1.020
10/31/1999	DCA Purchased	JV03-10-55						(15,464.92)	
Balances			12,000	26,455		0	26,455	0.00	



10260 Westheimer, Suite 230 • HOUSTON, Texas 77042
Phone: (713) 785-0053 Telex: 795110 Fax: (713) 977-3727

№ 000074

DATE 18-Mar-99

TERMS OF SALE 60 DAYS

SOLD TO

CEDAR CHEMICAL CORPORATION
P O BOX 2749 - HWY 242 SOUTH
WEST HELENA AR 72390

RAMS

P.O 04-023454

MAR 30 1960
WEST HELENA

[illegible]

ATION

ILARES CONSIGNADOS EN LA
DESTINATARIA POR CUALQUIER
PSE EN LOS SIGUIENTES:

AB0000063048

14-20 rue Pierre Buisel - BP 9163
69263 Lyon Cedex 09 - France
National: Tel. 04 72 85 25 25 - Fax 04 72 85 27 99
International: Tel. +33 4 72 85 25 25 - Fax +33 4 72 85 27 99
N. identifi. n. TVA FR 53 969 502 17

INVOICE NO: 60132668 DATED 04.05.1999
STAT : 065 01/91

INVOICEE: USCEDAR
CEDAR CHEMICAL CORPORATION
ATTN : BOB CHRISTIAN
P.O. BOX BOX 2749
72390 WEST HELENA/AR
UNITED STATES

MAY 27 1999

IN KUHNE ET NAGEL

EOC : SAJOBABONY

SH N° : 29214210

70,547 # DCA Tends To Em.

73,334 * ODCB KSE0

RHONE POULENC AGRO
3,4-DCPI
CEDAR / USA
N.W.....
G.W.....
NR.....

62.400,00 USD

11 des Impôts

[illegible]

RHÔNE POULENC
SECTEUR AGRO
Rue Pierre Baizet - B.P. 9163
69263 LYON CEDEX 09
72 85 25 25 - Fax 04 72 85 2
369 503 309 - Capital 1 431 51

14-20, rue Pierre Boizet - BP 9163
69263 Lyon Cedex 09 - France
Tel 04 72 85 25 25 - Fax 04 72 85 27 99
Telex 310 098 F Rhône
N° d'identification TVA FR 53 969 503 309

ORIGINAL

MAY 27 1999

WEST HELENA

MESSAGE NO. 015453 DATE: 27.04.1975
 SINT : 005. 01 91

CONSIGNEE: HUENY
NORTH HUNGARY: CHEMICAL
ENV
3792 SAJCEBONY
HUNGARY

INVOICEE: USCERAF
LEONAR CHEMICAL CORPORATION
ATTN: BOB CHRISTIAN
P.O. BOX BOX 2742
72390 WEST HELEN AR
UNITED STATES

REF	: 01 40107402 0010
REF	: 04033728
SHIPPING :	: BETE FRANCE
TERMS OF DELIVERY	: FOB-DELTV UNCLESEN
TERMS OF PAYMENT	: 50 IN 5 THREE DATE
PAYMENT DATE	: 28.07.1999
PAYMENT MODE	: TELEGRAPHIC TRANSFER
CURRENCY	: USD

NY 65-6921-76

201 : 541.5-594

PRODUCT CODE	: 19931.ARL
CUSTOMER REF NO	: 3.4 DE-
QUANTITY	: 44000000
UNIT PRICE	: 1.95 USD PER 1 PG
TOTAL	: 15,800.00 USD

File #: 921421

97,002# DCA SALE TO E
100,834# ODCB USED

W-21 7112

CHINESE POLICE CAPT
3-4-55

[illegible]

ST. LOUIS, Mo.

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RHÔNE POULENC
SECTEUR AGRO
Rue Pierre Balzat - B P 9163
9263 LYON CEDEX 09
85 25 25 - Fax 04 72 85 27 89
1 889 503 309 - Capital 1 431 515 000 F

AB0000063048

RHÔNE-POULENC

Rhône-Poulenc Agro

14-20, rue Pierre Buzet - B P 9163
69263 Lyon Cedex 09 - France
Tel 04 72 85 25 25 - Fax 04 72 85 27 99
Telex 310 098 F Rhone
N° identification TVA FR 53 969 503 309

MAY 27 1999

DEBIT NOTE

NO: 60125470 DATED: 30.07.1998

INVOICE : USCEDAR
CEDAR CHEMICAL CORPORATION
ATTN : BOB CHRISTIAN
P.O. BOX BOX 2749
72390 WEST HELENA/AR
UNITED STATES

USCEDAR
CEDAR CHEMICAL CORPORATION
ATTN : BOB CHRISTIAN
P.O. BOX BOX 2749
72390 WEST HELENA/AR
UNITED STATES

V/REF : A SUIVRE
TERMS OF PAYMENT : 90 DAYS INVOICE DATE
PAYMENT DATE : 28.10.1998
PAYMENT MODE : TELEGRAPHIC TRANSFER
CURRENCY : USD

0010 19931VVRC 34 DCA OUVRAISON CEDAR VRAC
O/REF : 01/60122288/0010/0000
PRODUCT.....: 34 DCA OUVRAISON CEDAR VRAC
NET VALUE 1 : 2.176.24 USD

O/ORD: 01/40132320/0010/0000

2.176.24 USD

ITEM TOTAL

2.176.24 USD

TOTAL TO BE PAID

VENDOR #		INVOICE #	
24804		60125470	
PO #	REC. RPT. #	INV. CD	INV. DATE
		1	073098
TERMS CODE	DUE DATE	FRY BILL CD	SALES ORDER #
D	10-28-98		
INVOICE AMT		DISC ALLOWED	
2176.24			
GL NUMBER	AMOUNT		WORK ORDER #
01535910	2176.24		235
DONE BY	DATE	APPROVED BY	ENTERED BY
RE	5-26-99	[Signature]	

EK : 850 FRF
WEEK : 10.200 FRF
LE HAVRE : 12.500 FRF

TOLL CONVERSION RATE :

AB0000063048

Rhône-Poulenc Agro

14-20, rue Pierre Baizet - B P 9163
69263 Lyon Cedex 09 - France
Tel 04 72 85 25 25 - Fax 04 72 85 27 99
Telex 310 098 F Rhône
N° identification TVA FR 53 969 503 309

MAY 2 - 1999

DEBIT NOTE

NO: 60125389 DATED 29.07.1998

INVOICE : USCEDAR
CEDAR CHEMICAL CORPORATION
ATTN : BOB CHRISTIAN
P.O. BOX BOX 2749
72390 WEST HELENA/AR
UNITED STATES

USCEDAR
CEDAR CHEMICAL CORPORATION
ATTN : BOB CHRISTIAN
P.O. BOX BOX 2749
72390 WEST HELENA/AR
UNITED STATES

Y/REF : A SUIVRE
TERMS OF PAYMENT : 90 DAYS INVOICE DATE
PAYMENT DATE : 27.10.1998
PAYMENT MODE : TELEGRAPHIC TRANSFER
CURRENCY : USD

0010 19931VVRG 34 DCA OUVRAISON CEDAR VRAC
O/REF : 01/60122288/0010/0000
PRODUCT.....: 34 DCA OUVRAISON CEDAR VRAC
NET VALUE 1 : 2.854.20 USD

O/ORD: 01/40132320/0010/0000

ITEM TOTAL

2.854.20 USD

2.854.20 USD

VENDOR #		INVOICE #	
24804		60125389	
P.O. #	REC. RPT. #	INV CD	INV DATE
		1	072998
TERMS CODE	DUE DATE	FRY BILL CD	SALES ORDER #
D	10-27-98		
INVOICE AMT.		DISC ALLOWED	
2854.20			
GL NUMBER		AMOUNT	WORK ORDER #
C153 5910		2854.20	235
DONE BY	DATE	APPROVED BY	ENTERED BY
RE	5-26-99	[Signature]	

JUNE 98 : 9800 FRF
DAY AND CT
DAY AND CT

Rhône-Poulenc
14-20, rue Pierre Belzet - A.P. 8163
69263 Lyon Cedex 09 - France
Tél 04 72 85 25 05 - Fax 04 72 85 27 99
Télex 310 098 F Rhône
N° identification TVA : FR 53 969 503 309

MAY 27 1999

VALERIA

7 NOTE
NO: 50124126 DATED: 11.03.1992

INVOICE : USCEDAR
CEDAR CHEMICAL CORPORATION
ATTN : BOB CHRISTIAN
P.O. BOX BOX 2749
72390 WEST HELENA/AR
UNITED STATES

USCEDAR
CEDAR CHEMICAL CORPORATION
ATTN : 808 CHRISTIAN
P.O. BOX 30X 7749
72030 WEST MELENA/AR
UNITED STATES

Y/REF
TERMS OF PAYMENT
PAYMENT DATE
PAYMENT MOIE
CURRENCY

- A SUPPLY
- 90 DAYS INVOICE DATE
- 09.09.1998
- TELEGRAPHIC TRANSFER
- USD

0010" 19931VVRC 34 DCA DIVRAISON CEDAR VRAO
O/REF : 01760122288/0010/0000
PRODUCT.....: 34 DCA DIVRAISON CEDAR VRAO
NET VALUE 1 : 128.845.90 USD

O/ORD: 01/40132320/00:0/0000

128,345,53 USC

ITER TOTAL

125.345,90 USD

TOTAL TO BE PAID.

COM 41: 004 TRANSPORT AND CONTAINERS RENTAL

[illegible]

1. NAME : _____
 2. DATE : _____
 3. TIME : _____
 4. PLACE : _____
 5. REASON : _____
 6. SIGNATURE : _____
 7. DATE : _____
 8. TIME : _____
 9. PLACE : _____
 10. REASON : _____
 11. SIGNATURE : _____
 12. DATE : _____
 13. TIME : _____
 14. PLACE : _____
 15. REASON : _____
 16. SIGNATURE : _____
 17. DATE : _____
 18. TIME : _____
 19. PLACE : _____
 20. REASON : _____
 21. SIGNATURE : _____
 22. DATE : _____
 23. TIME : _____
 24. PLACE : _____
 25. REASON : _____
 26. SIGNATURE : _____
 27. DATE : _____
 28. TIME : _____
 29. PLACE : _____
 30. REASON : _____
 31. SIGNATURE : _____
 32. DATE : _____
 33. TIME : _____
 34. PLACE : _____
 35. REASON : _____
 36. SIGNATURE : _____
 37. DATE : _____
 38. TIME : _____
 39. PLACE : _____
 40. REASON : _____
 41. SIGNATURE : _____
 42. DATE : _____
 43. TIME : _____
 44. PLACE : _____
 45. REASON : _____
 46. SIGNATURE : _____
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AB000006

JUN-01-89 10:30AM FROM: LEUAR CHEMICAL

Rhône-Poulenc Agro

14-20, rue Pierre Boisset - B.P. 9163
 69763 Lyon Cedex 08 - France
 Tél 04 72 85 25 25 - Fax 04 72 85 27 89
 Télex 370 098 F Rhône
 N° identification TVA : FR 53 969 503 309

ENTFER

MAY 27 1999

DEBIT NOTE

WEST HELENA

INVOICE # 0010
 CEDAR CHEMICAL CORPORATION
 ATTN: BOB CHRISTIAN
 P.O. BOX 2749
 72390 WEST HELENA/AR
 UNITED STATES

USLEHAR
 CEDAR CHEMICAL CORPORATION
 ATTN: BOB CHRISTIAN
 P.O. BOX 2749
 72390 WEST HELENA/AR
 UNITED STATES

V/REF : A SUIVRE
 TERMS OF PAYMENT : 30 DAYS INVOICE DATE
 PAYMENT DATE : 09.09.1998
 PAYMENT MODE : TELEGRAPHIC TRANSFER
 CURRENCY : USD

0010 : 19931VVHC 34 DCA COUVAISON CEDAR VRAO
 O/REF : 01/60121288/0010/0000
 PRODUCT..... : 34 DCA COUVAISON CEDAR VRAO
 NET VALUE 1 : 45.475,40 USD

O/ORD: 01/40132320/0010/0000

45.475,40 USD

ITEM TOTAL

45.475,40 USD

TOTAL TO BE PAID

ENDOR #		INVOICE #	
24804		60121125	
PRO #	REC RPT #	INV CD	INV. DATE
		1	06/11/98
TERMS CODE	DUE DATE	FRY BILL CD	SALES ORDER #
D	9.9.98		
INVOICE AMT		DISC ALLOWED	
45.475.40			
GL NUMBER	AMOUNT	WORK ORDER #	
01535910	45.475.40	235	



Inv./Ref. No. 2533/AG-2213

Date: JULY 3, 1999

Ship From: JARWARHAL NEHRU
PORT

Basis: CIF NEW ORLEANS, LA

Freight: PREPAID

Payment Terms: NET 30 DAYS B/L
DATE

CEDAR CHEMICAL CORP.
5100 POPLAR
MEMPHIS TN 38137 ENTERED

AUG 3 0 1999

WASH. FIELD

A LATE PAYMENT CHARGE OF 1% COMPOUNDED MONTHLY WILL BE APPLIED TO ANY AMOUNTS OUTSTANDING AFTER DUE DATE.

PRODUCT	QUANTITY	PRICE	AMOUNT
3,4 DICHLOROANILINE PURITY 98.5 %	12,000 KGS	US\$3.05/KG (CIF)	US\$36,600.00

ORIGIN: INDIA

PACKING:

240 X 50 KG NET DRUMS
TOTAL NET WT = 12,000 KGS
TOTAL GROSS WT = 13,560 KGS

FOB VALUE	US\$34,430.91
FREIGHT	2,000.00
INSURANCE	169.09

\$36,600.00

[illegible]

2RECT

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INC.

AB0000063048

CEDAR WEST HELENA				CC		C McGEE		R Farchild		Mo Book			
PROPANIL PRODUCTION AND USAGE						G Satterfield		P Fields		File Copy			
AS OF						B Christian		J Rone					
Oct-88													
FINISH GOODS MFG													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Y-T-D
DCA	1,008,106	1,057,745	1,010,116	1,388,929	1,163,176	1,058,511	1,071,128	1,209,153	907,253	649,737			10,521,854
ODCB	1,138,109	1,120,877	1,291,878	1,649,398	1,365,079	1,093,501	1,268,813	1,256,360	1,001,527	719,586			11,903,128
Nitric Acid	492,059	474,881	542,639	728,842	618,875	518,841	583,122	547,384	414,827	323,785			5,223,815
Sulfuric Acid	971,379	911,899	1,060,090	1,378,989	1,210,131	897,605	1,078,457	1,041,074	777,491	574,825			8,890,850
Plat/Cerb Cata	282	265	287	381	355	401	547	557	411	327			3,793
Hydrogen	51,718	48,926	58,409	72,841	63,256	53,604	65,278	58,021	44,789	41,788			556,740
Soda Ash	12,016	2,608	10,976	9,454	4,030	1,632	1,298	4,684	888	2,768			60,372
Lime	37,600	23,400	27,400	33,600	32,100	23,100	40,100	28,700	24,000	24,300			294,300
Caustic 50%	73,386	47,210	29,724	48,095	68,323	83,829	52,578	25,589	29,080	58,418			516,012
Hydr Peroxide	8,000	1,000	4,000	7,500	8,500	3,000	3,000	5,500	1,500	7,000			49,000
Methanol	1142												1,142
TEPA	681	863	533	346	859	620	286	502	604	822			6,206
Ferrous Sulfate	138	60	125	213	225	75	125	125	87	175			1,338
Propanil Tech	1,088,110	1,498,470	1,389,885	1,500,572	1,351,740	703,680		883,105	1,360,023	1,278,030			11,029,415
DCA	834,620	1,127,520	1,011,583	1,151,322	991,940	505,440		680,400	1,021,595	969,414			8,294,014
P Acid	455,484	613,326	568,309	644,465	580,356	290,683	152	408,296	572,870	561,415			4,673,356
P Anhy	2,110	992		1,081	3,885			1,738	6,369	37,783			64,068
Plaked Tech	105,000	48,500	22,500	369,000	729,000	268,500			988,203	835,500			3,344,203
P Tech	105,000	48,500	22,500	369,000	729,000	268,500			988,203	835,500			3,344,203
3# Bulk	20,845			26,880	8,877	85,880	13,753	84,327	68,693				311,055
P Tech	63,230			85,853	31,800	278,000	47,530	271,850	220,720				997,883
Isoph	40,200			59,219	20,000	174,360	20,950	170,540	141,891				627,260
MO													-
Emul					2,970				2,500				5,470
Aromatic B	39,628			48,377	22,011	154,240	26,550	151,240	123,140				565,186
Amul	26,080			35,678	13,040	110,380	19,500	111,340	77,393				393,392
Sun Oil	8,680			11,890	4,345	37,794	6,500	37,120	30,170				138,499
Tenn 500													-
4# Bulk	20,300	89,488	134,533	32,876	105,720	35,678			61,971	94,341			584,707
P Tech	84,040	414,605	539,255	135,605	442,710	134,870			222,400	392,010			2,365,485
Isoph	15,020	76,887	101,537	24,308	80,260	25,150			45,485	71,350			439,995
MO	60,100	298,590	390,039	97,087	331,319	98,236			160,190	283,825			1,719,386
Emul	19,680	67,604	126,365	30,225	103,335	31,876			56,828	104,320			572,033
Aromatic B													-
Amul													-
Isoph/Mibk													-
4# X Bulk	40,877				4,865			125,189					171,041
P Tech	168,940				20,750			514,000					703,690
MO	67,500				8,280			211,725					287,615
Isoph	67,800				8,280			205,170					281,060
Emul	33,619				3,880			98,835					138,534
Sun Oil	16,400				2,000			49,570					67,970
Aromatic B													-
Amul	7,200				880			21,820					30,000
Stam Bulk	75,831	179,638	97,188	103,824	30,265	14,130							500,986
P Tech	319,195	753,350	405,130	428,894	127,485								2,034,064
Isoph/Mibk	290,720	683,130	393,141	408,213	145,271								1,920,475
Emul	67,780	160,945	88,740	93,843	27,025								498,333
Isoph		250											250
MO													-
Osuron-Days		14	31	30									75
Standard Grade		131,400	259,200	183,661									574,261
B Grade													-
DCPI		118,900	214,800	143,800									477,300
DMA		28,520	53,390	35,815									118,725
Heptane		4,988	12,231	6,104									23,301
Sulfuric Acid													-
50% Rayon Caustic													-

FINISHED GOODS MFG CONT'D		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Y-T-D	#W or Gal	Std
TA-Days	Prod															
	Nitromethane															0 7600
	Formaldehyde															2 6000
	Methanol															0 2480
	Sulfuric Acid															0 0660
	Rensy Nickel															0 0110
	Hydrogen															0 1420
	50% Caustic															0 1000
	Wham Prod	100,800	8,370	50,100	102,709	116,140	115,730	10,440						504,289		
	Flake Tech	180,000	204,000	216,000	522,000	228,906	398,000	13,224						1,758,130	3 4864	4 1240
	Monwet	7,750	9,400	9,000	21,690	9,100	16,500	300			4,885			78,725	0 1561	0 0870
	Polyfon O	210	238	252	608	283	482	14			(328)			1,720	0 0034	0 0100
	Glycerine	10,500	11,900	12,600	30,450	13,251	23,100	817			(3,456)			99,162	0 1868	0 2430
	Alfonic										13,571			13,571	0 0269	0 3890
	Kelzan	390	442	488	1,131	471	858	14			114			3,888	0 0077	0 0060
	Veegum	8,340	9,490	10,080	24,050	9,752	13,020	600			4,802			80,134	0 1589	0 1170
	Antifoam DC 1500	320	362	372	899	346	486	17			1,157			3,959	0 0079	0 0010
	Technical Carbaryl	300	340		870	375	660	20			(1,360)			1,205	0 0024	0 0070
	Ethaphon	200	227	240	580	230	440				97			2,014	0 0040	0 0040
	Soprophor 40384	18,680	22,304	23,616	57,072	24,594	43,286	1,260			7,896			198,716	0 3960	0 1460
	Proxal	1,203	2,655	1,478		47	605				678			6,665	0 0122	
	Formaldehyde	58	284	366			117							825	0 0016	
	Glutaraldehyde						5,082	162			24,021			29,265	0 0580	
	Dust Prod			138,600	82,520	2,480								203,580		
	Flake Tech			457,500	329,400									786,900	1 5604	4 1240
	Veegum			21,000	15,120						1,981			38,081	0 0765	0 1170
	Glycerine			27,000	18,440						(1,411)			45,029	0 0893	0 2430
	Soprophor 40384			49,500	85,640						3,225			88,365	0 1762	0 1460
	Monwet			18,750	13,500						2,036			34,286	0 0680	0 0970
	Polyfon O			525	378						(134)			789	0 0015	0 0100
	Ethaphon			500	360						40			900	0 0016	0 0400
	Proxal			3,075	3,913						278			7,268	0 0144	
	Formaldehyde			735	675									1,410	0 0028	
	Antifoam			775	558						472			1,805	0 0038	0 0010
	Benzothuron			3,625	2,638									6,063	0 0120	
	Kelzan			975	702						46			1,723	0 0034	0 0060
	Butox 175 Prod				18,691	14,680	17,417	10,523	4,636					65,947		
	2-4 D-B Acid				35,715	26,780	32,100	18,420	8,955					121,970	1 8495	1 8000
	DMA				16,645	12,755	14,820	9,097	4,468					57,775	0 8761	0 8000
	Citic Acid				4,965	3,660	4,365	2,625	1,217					16,832	0 2552	0 2600
Butox 200	Prod	10,840	1,660					1,380	5,645	15,825				35,250		
	2-4 D-B Acid	23,060	3,880					3,570	5,670	32,963				69,033	1 9584	2 0800
	DMA	12,540	2,010					1,705	7,625	17,977				41,857	1 1874	1 1000
	Citic Acid	4,685	780					485	2,575	6,405				14,890	0 4224	0 4200
Butox 750	Prod									47,325	6,425			53,750		
	2-4 D-B Acid									38,611	3,277			41,888	0 7793	0 7650
	Continental Clay									7,720	(281)			7,439	0 1368	0 1840
	Hi Sil 233									275	2,038			2,313	0 0430	0 0060
	Steparse DF 200									2,903	(404)			2,499	0 0485	0 0600
	Steparse DF 95									275	(23)			252	0 0047	0 0060
FINISH GOODS PKG (Number Containers)		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Y-T-D Containers	Total Gals/Lbs	Grand Total
	Prop 360 35 g															
	Prop 360 200L															
	Prop 360 210L															
	Supemox 360 200L															
	3# 20L				4,673	69		192		1,663				6,907	35,941	
	3# 50L								(2)					(2)	(28)	
	3# 200L					213	1,641	62	1,245	1,730				4,811	254,213	
	3# 65L	378												978	20,845	310,973
	4# 20L					440								440	2,328	
	4# 85		3,528	3,776		1,967	1,098			1,025	2,841			14,223	498,155	
	4# 200L	529				8			2,289					2,820	149,008	
	4# 210L															
	4# 65	225	(14)						86					307	16,685	
	Supemox 480 200L															

FINISH GOODS PRG CONT'D (Number Containers)															Y-T-D	Total	Grand
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Containers	Gals/Lbs	Total		
Propanex 48 35																	
Propanex 500 55 g																666,372	
Stem 35	1,337	3,637	3,565	2,818									11,357	397,495		397,495	
Tham 25 g																	
Pure Tromethamine 2																	
Trometamol 25 Kg																	
Trometamol 50 Kg																	
Tra Ultra Pure 100Kg																	
Pure Trish Hcl 100 Kg																	
Wham Bulk				17,359	8,200								25,559	25,559			
Wham 2x2.5						6							5	25			
Wham 5																	
Wham 100 L																	
Wham 30																	
Super Wham 2x2.5						5							5	25			
Super Wham 30	3,360	279	1,670	2,845	3,598	3,656	348						15,956	478,680	504,289		
Dust 30			4,620	2,084									6,704	201,120	201,120		
Bandit 200L																	
175 4x1				2,029	3,670	763	2,412	1,159					10,033	40,132			
175 2x2.5				2,115		2,875	175						5,165	25,825			
175 55																65,957	
200 4x1																	
200 2x2.5	2,168	332					276	1,109	3,165				7,050	35,250			
200 55																35,250	
7500 10x2.33										1,296			1,296	30,197	30,197		
Flaked Tech 25 Kg OS Ptl	1,122	1,240	1,120	1,360	640		40						6,522	304,262			
Flaked Tech 25 Kg IS Ptl					200	1,630	2,105			1,180	1,215		6,830	386,313	689,575		
Diuron Col 248 Kg																	
Diuron Col 224 Kg																	
Butoxone 7500 10x2.33									1,296	906			2,202	22,020	22,020		
CUSTOM MFG																	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Containers	Gals/Lbs	Total		
Acfluorfen-Days	15	28	21	30	31	30	31	31	30	31			278				
Prod 100% Al lbs	96,014	143,900	151,181	151,628	169,964	255,683	238,245	60,518	147,835	83,049			1,507,737				
Mixed Acid	69,967												69,967	0 0464			
Perkline D				44,940			48,560						93,500	0 0820			
Sulfuric Acid		22,885	18,170	22,310	29,440	28,930	32,470	7,220	23,390	12,823			197,638	0 1311	0.2400		
Nitric Acid		43,808	37,058	47,074	57,944	61,777	65,910	13,665	43,164	23,786			394,172	0 2614	0.2600		
Acetic Anhydride	52,070	123,955	108,704	120,642	159,510	184,249	171,663	35,620	112,220	69,759			1,116,382	0.7404	0.7200		
PCE		84,940											84,940	0 0630	0.1200		
50% Caustic	182,636	166,332	166,872	187,976	233,024	282,288	348,808	78,438	202,188	128,514			1,862,376	1 3015	1.2000		
Soda Ash										100			100	0 0001			
R118118	245,500	480,000	432,000	620,000	643,550	683,000	678,500	132,000	478,500	264,000			4,536,050	3 0079	3.5400		
BFO-Days					16		31	22					88				
Production						681,550	2,765,780	1,462,010					4,909,320				
CYBP-Days	4						31	31					66				
Prod 100% AJ	4,230						7,183	18,784					30,197				
DICNIL	7,330						22,710	21,522					51,562	0 0342			
IPA	10,670						17,450	18,896					47,116	0 0312			
50% Caustic	5,123						10,548	23,014					38,685	0 0257			
Catalyst	26						73	74					175	0 0001			
Hydrogen	174						676	638					1,890	0 0011			
Hcl	10												10	0 0000			
Dover Phos-Days		6	29	30	31	30							128				
Production			9,460	28,720	65,450	5,400							109,030				
Phenol		5,400	38,625	40,435	70,230	9,985							162,575	0 1078			
Caustic		20	140	180	340	50							710	0 0005			
TTP		7,800	75,532	64,421	112,910	18,085							278,748	0 1836			
PE		1,595	13,848	14,070	24,840	3,520							57,773	0 0383			
DCP		10,575	78,578	83,383	140,735	21,855							336,126	0 2228			
Xylene		50,950	98,980		7,365								155,295	0 1030			
Methanol		51,720					78,754						130,474	0 0865			
Phenol2																	

CUSTOM MFG	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Containers	Gal/Lbs	Total
Ethephon-Days															
Prod 100% AI															
Ethylene Oxide															1 198
Phosphorus Trichloride															1 242
Anhydrous Hydr Chloride															0 850
Sulfuric Acid															
50% Caustic															1 189
FMC 6-Nitro-Days	31	28	31	30	10								130		
Prod 100% AI	21,781	18,705	28,822	34,017	2,916								108,241		
Step 3	127,863	69,421	166,148	168,104									551,536	5 1914	5 920
Step 4															1 033
Step 5															1 000
Calcium Chloride															
Chlorine	13,717	8,280	11,910	12,091									45,978	0 4328	0 170
Aluminum Sulfate	34,347	25,049	38,178	50,470	1,870								147,814	1 3922	1,830
G Acid	14,559	5,852	5,842	15,314									41,367	0 3894	0,900
50% Caustic	7,668	9,280	27,272	25,000	9,285								78,515	0 7390	1 920
20% Oleum	108,439	81,999	40,309	148,504	12,978								332,228	3 6919	5 160
Methanol	21,458	23,340	12,741	32,502	8,348								96,387	0 8261	4 880
Soda Ash	4,900	3,700	3,850	6,000	1,000								19,250	0 1812	0 190
Toluene	110,448	114,324	90,165	158,049	12,167								465,143	4 3782	4 570
83% Sulfuric Acid				61,200									61,200	0 5760	0 010
Mixed Acid	7,581	5,774	8,455	11,820	1,281								32,891	0 3098	0 410
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Containers	Gal/Lbs	
Stanol-Days									14	31			45		
Prod Kg									3,547	11,724			15,271		
Stanol									24,217	52,243			78,460	0 7187	
N-Propanol									63,691	143,150			206,841	1 9469	
Catalyst									154	874			1,028	0 0097	
Hydrogen										274			274	0.0026	

RHÔNE-POULENC INC.

P.O. Box 125 - Black Horse Lane - Monmouth Junction New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

August 1, 1986

Mr. Ron Cheves
Vice President
Cedar Chemical Corporation
5100 Poplar
24th Floor
Memphis, Tennessee 38137

Dear Mr. Cheves:

Rhone-Poulenc Inc. proposes to enter into a contract with Cedar Chemical Corporation (hereinafter "Cedar") concerning certain steps in the production of Tackle[®], intermediates, which include production of two intermediates: 1) by a coupling reaction and 2) the other by nitration and neutralization steps. This Letter Agreement sets forth the following key terms and conditions agreed upon by the parties:

Coupling Reaction - RP-15

Cedar will modify an existing production facility for a maximum charge of \$75,000 to produce a minimum of 684,000 pounds of RP-15 at a nominal rate of 10,000 pounds per day (100% basis). The maximum charge of \$75,000 will be invoiced monthly and payment shall be made within 10 days of the date of the invoice. The amount of such invoices shall be equal to the expenditures actually incurred by Cedar for modification and installation charges related to Cedar's existing equipment. In order to verify Cedar's expenditures, Cedar shall make said invoices available to Rhone-Poulenc Inc. upon request.

The production rate will be guaranteed by Cedar, following a 7 day process confirmation start-up period, to be attended by Rhone-Poulenc personnel.

Production of 684,000 pounds is projected to be complete in 76 days. Additional production beyond 684,000 pounds, if desired, will be continued for 14 days and will be charged at the rate of \$.35 per pound of RP-15 (100% basis).

Production will commence on October 1, 1986, following a 6 week period required for plant preparation.



ADEQ0021197

Total processing charges for 90 days of production will be \$435,000, to be paid in three equal payments during the 90 day campaign. Additional production during the 90 day period will be charged at the rate of \$.35 per pound. Production time requested, beyond the 90 day period, will be charged for at the rate of \$175,000 per month - pro rata per day.

Nitration - Neutralization - RP-10

Cedar will modify an existing production facility for a maximum charge of \$425,000 to produce a minimum of 600,000 pounds of RP-10 at a nominal rate of 9,000 pounds per day (100% active basis). The maximum charge of \$425,000 will be invoiced monthly, and payment shall be made within 10 days of the date of the invoice. The amount of such invoices shall be equal to the expenditures actually incurred by Cedar for the purchase of equipment. Such equipment shall belong to Cedar except for a glass-lined reactor which shall belong to Rhone-Poulenc Inc. In order to verify Cedar's expenditures, Cedar shall make said invoices available to Rhone-Poulenc Inc. upon request.

The production rate will be guaranteed by Cedar following a 7 day process confirmation start-up period, to be attended by Rhone-Poulenc personnel.

Production of 600,000 pounds is projected to be complete in 73 days. Additional production beyond 600,000 pounds, if desired, will be continued for 17 days and will be charged at the rate of \$.35 per pound.

Production will commence as early as January 15, 1987 but no later than February 15, 1987, following a 10-12 week period required for plant preparation. Rhone-Poulenc Inc. shall provide Cedar with 30 days advance written notice of the actual commencement of production.

Total processing charges for 90 days of production will be a minimum of \$550,000, to be paid in three equal payments during the campaign. Additional production, during the 90 day period, will be charged for at the rate of \$.35 per pound of RP-10 (100% basis). Production time requested beyond the 90 day period will be charged for at the rate of \$200,000 per month - pro rata per day.

General Provisions

Cedar will secure necessary permits required to begin and continue production. Rhone-Poulenc Inc shall provide any necessary information or assistance in the procurement of said permits; and the status of said permits will be reviewed every 30 days by Cedar's and Rhone-Poulenc Inc.'s appropriate personnel. Cedar shall also advise Rhone-Poulenc Inc. in writing as to the need of any permit. If a 30 or more day delay occurs in processing any permit or if Cedar fails to procure a necessary permit, Rhone-Poulenc Inc. shall have the right to terminate this Agreement upon written notice to Cedar. However, Rhone-Poulenc Inc shall forfeit any monies paid prior to the date of termination.

Wastes will be processed by Cedar, if necessary, and sent off site for disposal with Rhone-Poulenc being charged the actual commercial rate. The costs of such waste processing is included in the over-all processing charge. Cedar shall provide Rhone-Poulenc Inc. with a detailed statement concerning its methods of waste disposal and shall verify that such methods comply with existing Federal and State environmental laws. Prior to the disposition of any wastes, the parties shall mutually agree upon the waste disposal site. In the event Cedar can process wastes through the biological system at West Helena, Cedar will share the savings with Rhone-Poulenc Inc.

Production facilities prepared for this project will be maintained by Cedar and will be made available to Rhone-Poulenc for additional production campaigns during a three year period. Prices will be approximately the same as provided in the first campaign with appropriate escalators to be provided in a subsequent Contract between the parties. Cedar will require advance notice of intent by June 1, 1987 to produce and volumes required. At the time of notification, Rhone-Poulenc Inc. shall advise Cedar whether to proceed only with the coupling step or also with the nitration and neutralization steps.

Cedar will be responsible for raw material consumption following the start-up process confirmation period. However, Cedar shall pay for the loss of any raw materials as a result of its negligence or the failure of equipment. In the event material is not in accordance with specifications, Cedar shall make a good faith effort to reprocess the material in order to comply with specifications.

Rhone-Poulenc will provide containers for shipment of product FOB West Helena, Arkansas.

Rhone-Poulenc will provide all raw materials and bear the cost of all waste disposal.

Notwithstanding this Letter Agreement, it is also understood that all of the terms and conditions contained herein will be incorporated into a formal Contract which will be executed no later than August 29, 1986. The Contract will also make provision for additional terms and conditions covering such items as: indemnities, warranties, insurance etc.

Please indicate your agreement with these terms and conditions by signing and dating the original and two copies of this Letter Agreement returning the original and a copy to me.

Very truly yours,

RHONE-POULENC INC.

BY: Jean-Pierre Dal Pont
Jean-Pierre Dal Pont
Vice President of
Technical Services

ACCEPTED AND AGREED TO:

CEDAR CHEMICAL CORPORATION

BY: Ron Cheves
Ron Cheves
Vice President

DATE: 8.1.86

Tackle® is a registered trademark of Rhone-Poulenc Inc.

SECTION FOUR

844482

ALERT

8/5/86

2

ENGINE FOLLIO

CHAS FLEET L/L FORT

TO CONFIRM THAT OUR COUPLING STARTUP DATE IS OCTOBER 1, 1986.
HOWEVER CHAS MAY BE READY TO BEGIN AS EARLY AS SEPTEMBER
15 AND RAW MATERIALS SHOULD BE SCHEDULED ACCORDINGLY.

TECHNICAL CONTACT AT WEST VALLEY PLANT IS TOM LONIC.
ALTERNATE IS JOHN WILKS. PURCHASING CONTACT IS CHARLIE
FLEET. ALTERNATE JOHN WILKS.

LOCATIONS

GLOFF DEPT

CHAS CHEMICAL COFF./53927

*
SECTION FOUR

RHÔNE-POULENC INC.

P O Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

August 1, 1986

Mr. Ron Cheves
Vice President
Cedar Chemical Corporation
5100 Poplar
24th Floor
Memphis, Tennessee 38137

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ADEQ0017705

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Notwithstanding this Letter Agreement, it is also understood that all of the terms and conditions contained herein will be incorporated into a formal Contract which will be executed no later than August 29, 1986. The Contract will also make provision for additional terms and conditions covering such items as: indemnities, warranties, insurance etc.

Please indicate your agreement with these terms and conditions by signing and dating the original and two copies of this Letter Agreement returning the original and a copy to me.

Very truly yours,

RHONE-POULENC INC.

BY: Jean-Pierre Dal Pont
Jean-Pierre Dal Pont
Vice President of
Technical Services

ACCEPTED AND AGREED TO:

CEDAR CHEMICAL CORPORATION

BY: Ron Cheves
Ron Cheves
Vice President

DATE: 8.1.86

Tackle® is a registered trademark of Rhone-Poulenc Inc.

RHÔNE-POULENC INC.

P O Box 125 - Black Horse Lane - Monmouth Junction New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

September 5, 1986

Mr. Ron Cheves
Vice President
Cedar Chemical Corporation
5100 Poplar Avenue
24th Floor
Memphis, Tennessee 38137

Dear Mr. Cheves:

The terms and conditions of this Letter Agreement in conjunction with the terms and conditions of the August 1, 1986 Letter Agreement, incorporated herein by reference and attached hereto as Exhibit "A", shall constitute the Agreement between Cedar Chemical Corporation, a Delaware corporation, with offices at Suite 2414, Clark Tower, 5100 Poplar Avenue, Memphis, Tennessee 38137, (hereinafter "Cedar") and Rhone-Poulenc Inc., a New York corporation, with offices at Black Horse Lane, Monmouth Junction, New Jersey (hereinafter "Rhone-Poulenc") concerning certain steps in the production of Tackle® intermediates which include production of two intermediates--1) by a coupling reaction and 2) the other by nitration and neutralization steps.

Definitions

For purposes of this Agreement, the following terms shall have the following meanings assigned thereto:

"RP-15" shall mean product meeting those specifications attached hereto as Exhibit "B"

"RP-10" shall mean product meeting those specifications attached hereto as Exhibit "C".

Term

This Agreement shall commence as of August 1, 1986 and shall terminate on June 1, 1989, unless terminated earlier in accordance with the provisions hereof, or unless extended by mutual agreement of the parties hereto.

Plant Modifications and Equipment

Cedar has heretofore undertaken to modify the plant in accordance with plans and specifications which have been approved by Rhone-Poulenc, so as to enable Cedar to initiate production of RP-15 on September 15, 1986.



ADEQ0017705

Beginning August 31, 1986 and on the last day of each month thereafter until completion of such modifications, Cedar shall invoice Rhone-Poulenc for all expenses incurred in so modifying the Plant, provided that the total of such invoices shall not exceed \$75,000. Title to all equipment and facilities acquired in connection with such modifications shall be and remain in Cedar. Cedar shall complete the modifications by September 15, 1986.

Beginning on August 31, 1986, Cedar shall initiate additional modification of the Plant in accordance with the plans and specifications to be approved by Rhone-Poulenc so as to enable Cedar to produce RP-10 as early as January 15, 1987 but no later than February 15, 1987. Cedar shall submit monthly invoices to Rhone-Poulenc for reimbursement of costs incurred in connection with said modifications beginning the 30th day of September, 1986 and monthly thereafter provided that the aggregate of said invoices shall in no event exceed the sum of \$425,000, except to the extent of any excess expenditures approved in writing by Rhone-Poulenc with respect to any changes in the scope of the work. Cedar shall retain title to all equipment and other facilities acquired by it in connection with such modifications, except for a glass-lined reactor which shall belong to Rhone-Poulenc Inc.

All invoices submitted by Cedar to Rhone-Poulenc for plant modifications shall be due and payable by Rhone-Poulenc within ten days from the date of such invoices. Cedar shall make available to Rhone-Poulenc upon request reasonably detailed documentation supporting the costs and other expenditures covered by such invoices, including any labor costs.

Method of Operation

Throughout all production campaigns under this Agreement, Rhone-Poulenc shall furnish Cedar, or cause it to be furnished, with raw materials in amounts sufficient to enable Cedar to produce the quantities of RP-15 and RP-10 required hereunder in a timely fashion so as to permit production of said Products in continuous campaigns of ninety days each, such raw materials to be furnished in bulk, FOB the Plant.

Cedar shall provide at the Plant receiving, storage and delivery facilities and services necessary to fully perform its obligations hereunder. Cedar shall take reasonable steps to preserve and protect raw materials and Products produced therefrom contamination, theft, damage or destruction while in Cedar's possession.

Cedar will inspect all raw materials tendered by Rhone-Poulenc hereunder, and promptly shall advise Rhone-Poulenc's designated representative of any apparent defects in such raw materials. Rhone-Poulenc shall provide to Cedar a weight ticket and certificate of analysis for all raw materials to be delivered by it hereunder.

Cedar shall ship Products in accordance with Rhone-Poulenc's instructions and at Rhone-Poulenc's sole cost and expense.

Title And Risk Of Loss

Title to raw materials delivered by Rhone-Poulenc to Cedar and title to Products produced by Cedar therefrom shall at all times remain solely in Rhone-Poulenc. Raw materials and Products shall be segregated from other materials and goods of Cedar.

Subject to the terms of this Agreement, Cedar shall assume the risk of loss of or damage to raw materials from the time of delivery to it hereunder, and for loss of or damage to work in process and to Products produced hereunder until delivery to Rhone-Poulenc's carrier at the Plant, except to the extent that such loss or damage results from Rhone-Poulenc's negligence. In no event shall Cedar be liable to Rhone-Poulenc for indirect or consequential damages alleged as a result of any such loss or damage.

Waste Disposal

Cedar's responsibility for handling waste generated as a result of its performance hereunder shall be (a) to neutralize said waste in such manner as will permit off-site disposal of same, and (b) to assist Rhone-Poulenc in the selection of a contractor to handle off-site treatment or disposal of such waste. The cost of all such off-site treatment or disposal of waste hereunder shall be borne directly by Rhone-Poulenc. Rhone-Poulenc shall indemnify Cedar and save it harmless from and against all costs or damages, including reasonable attorneys' fees incurred by it which shall arise out of transportation, storage or treatment of such waste in any manner approved by Rhone-Poulenc hereunder. However, such indemnification shall not apply to any costs or damages, including reasonable attorneys' fees incurred by Cedar which arise as a result of its negligence or its violation of any statute, ordinance or regulation.

Cedar shall make its best efforts to develop on-site disposal methods and processes to be carried out at the

Plant. In the event Cedar is successful in developing any such on-site waste disposal process, it shall also be responsible for obtaining and maintaining all required Federal and State Permits, and the parties shall negotiate in good faith to establish a reasonable waste disposal fee for such on-site treatment and disposal of waste generated hereunder.

Access To Plant/Assistance

Cedar shall keep Rhone-Poulenc fully and currently informed with respect to its modification and production activities hereunder and shall afford reasonable access to Rhone-Poulenc personnel to observe such operations. Rhone-Poulenc shall hold Cedar harmless from and indemnify it against all claims and liability on account of personal injuries suffered by Rhone-Poulenc personnel while at the Plant.

During the course of Plant modifications and start-up periods referred to herein, Rhone-Poulenc shall provide Cedar with on-site personnel capable of assisting Cedar in said activities, and shall provide such other services as Cedar shall reasonably request in order to accomplish the goals of this Agreement.

Warranties

Cedar warrants that all Products produced by it hereunder following the process confirmation start-up periods for RP-15 and RP-10, respectively, shall conform to the specifications attached hereto as Exhibits "B" and "C" respectively, as same shall be revised either during the process confirmation start-up periods or thereafter by consent of the parties hereto. Cedar makes no other warranty with respect to the Products to be manufactured hereunder, whether of merchantability or fitness for a particular purpose, and none shall be implied.

Cedar warrants that all raw materials furnished by it hereunder shall conform to the specifications included in Exhibits "D" hereunder.

Indemnification

Cedar agrees to hold Rhone-Poulenc harmless from and to indemnify against all loss, costs, damages, liability and expense, including reasonable attorney's fees, on account of any personal injury or property damage arising out of Cedar's manufacture, handling and storage of raw materials and Products hereunder during period when such materials are in Cedar's possession

and control, except to the extent that such occurrences are caused by the negligence of Rhone-Poulenc.

Rhone-Poulenc agrees to hold Cedar harmless from and to indemnify it against all loss, costs, damages, liability and expense, including reasonable attorney's fees on account of all personal injury or property damage arising out of occurrences relating to the handling, storage, transportation, sale or use of raw materials delivered to Cedar hereunder and RP-15 and RP-10 produced by Cedar hereunder when such materials are not in Cedar's possession and control, except to the extent that such occurrences are caused by the negligence of Cedar.

Payment of Processing Charges For RP-15 and RP-10

Cedar's total processing charge for undertaking the initial RP-15 campaign hereunder shall be the sum of \$435,000 which sum shall be invoiced by Cedar to Rhone-Poulenc in three equal monthly installments, the first to coincide with start-up of facilities at the Plant at the beginning of the initial RP-15 campaign, and the remaining two invoices to be issued at the end of each thirty days thereafter. The total processing charge so invoiced shall cover any amount of production of RP-15 during the initial ninety-day campaign up to 684,000 pounds. Additional production of RP-15 during the ninety-day campaign shall be invoiced to Rhone-Poulenc at the rate of thirty-five cents (\$.35) per pound. In the event the initial RP-15 campaign is extended beyond the original ninety-day period, additional production time will be charged to Rhone-Poulenc at the rate of \$175,000 per month, prorated for any period shorter than one month.

Cedar's total processing charge for undertaking the initial RP-10 campaign hereunder shall be the sum of \$550,000, which sum shall be invoiced by Cedar to Rhone-Poulenc in three equal monthly installments, the first to coincide with the start up of facilities at the Plant at the beginning of the initial RP-10 campaign, and the remaining two invoices to be issued at the end of each thirty days thereafter. The total processing charge so invoiced shall cover any amount of production of RP-10 during the initial ninety-day campaign up to 600,000 pounds. Additional production of RP-10 during the ninety-day campaign shall be invoiced to Rhone-Poulenc at the rate of thirty-five (\$.35) cents per pound. In the event the initial RP-10 campaign is extended beyond the original ninety-day period, additional production time will be charged to Rhone-Poulenc at the rate of \$200,000 per month, prorated for any period shorter than one month.

Cedar's Acknowledgement

Cedar acknowledges that it has received process information safety studies, Material Safety Data Sheets of all raw materials and waste streams and products from Rhone-Poulenc; and Cedar also acknowledges that it is a chemical manufacturer, knowledgeable in the safe handling of chemicals and qualified to perform the required manufacturing functions hereunder.

Usage Factors

During each process confirmation start-up period (each period to be for a maximum of seven consecutive days following initial start-up), it is understood that Cedar and Rhone-Poulenc shall agree upon usage factors for raw materials and waste by products.

Invention

Should any invention arise from an improved manufacturing process of RP-15 or RP-10 as a result of Rhone-Poulenc's or Cedar's efforts, such invention and any patent rights thereto should belong exclusively to Rhone-Poulenc Inc.

Failure To Issue Additional Purchase Orders

Cedar shall maintain the Plant, for future production campaigns during the initial term of this Agreement; provided, however, that Rhone-Poulenc shall issue future purchase orders to Cedar not later than June 1, 1987 and by June 1 of each successive calendar year during the term hereof for production of either RP-15 or RP-10, or both. In each case such campaigns shall be completed by May 31 of such contract year. If Rhone-Poulenc fails to issue such additional purchase orders, Cedar shall have the right to terminate this Agreement upon written notice to Rhone-Poulenc. Processing charges for such additional campaigns following June 1, 1987 shall be substantially identical to those applicable to the initial campaigns.

Force Majeure

No liability shall result from non-performance or delay in performance caused by circumstances beyond the reasonable control of the affected party; provided, however, that any party whose performance is prevented or impeded by such circumstances shall promptly provide written notice with reasonable particulars to the other party.

Notices

All notices required hereunder shall be deemed to be properly served as sent by first class mail, postage prepaid thereon or by telegram or overnight mail, and addressed to the party for whom intended at the following addresses:

If to Cedar:

Mr. G.L. Pratt
Cedar Chemical Corporation
24th Floor, Clark Tower
5100 Poplar Avenue
Memphis, Tennessee 38137

If to Rhone-Poulenc:

Mr. Jean-Pierre Dal Pont
Vice President of Technical Services
Rhone-Poulenc, Inc.
P.O. Box 125
Black Horse Lane
Monmouth Junction, New Jersey 08852

Default

Anything elsewhere in this Agreement to the contrary notwithstanding, if either party breaches any of its obligations hereunder, becomes insolvent or commits an act of bankruptcy, or if a receiver is appointed for either party, then in any such event the other party may terminate this Agreement effective fifteen (15) days following written notice of termination by reason of such default, provided such default shall not have been cured by the effective date of such notice.

Independent Contractor

Cedar's performance hereunder is not deemed to create an agency between the parties hereunder, it being understood that Cedar is acting solely as an independent contractor, and is solely responsible for the employment, control and conduct of its employees.

Secrecy Agreement

The Secrecy Agreement dated March 12, 1984 between Cedar and Rhone-Poulenc attached hereto as Exhibit "E" is incorporated herein by reference.

General Provisions

The parties further agree as follows: (a) This Agreement shall be governed by the laws of the State of Arkansas; (b) No modification of this Agreement or waiver of any of its provisions shall be effective unless in writing and signed by the party to be bound thereby. Neither party's waiver of any breach of any of the provisions of this Agreement shall be deemed to be a waiver of any subsequent breach of the same nature or of any breach of a different nature; (c) This Agreement shall bind the successors and assigns of the parties hereto, but neither party may assign its rights or interests in this Agreement without the prior written consent of the other party, which consent shall not be unreasonably withheld; provided that Cedar may assign its rights in this Agreement to any purchaser of the Plant and Rhone-Poulenc may assign its rights in this Agreement to a purchaser of substantially all of its pesticide business; (d) If the terms of any purchase orders or invoices are contrary to the terms and conditions of this Agreement, the terms and conditions of such purchase orders or invoices are superseded by the terms and conditions of this Agreement. The section headings in this Agreement are inserted for convenience only and are not to be construed as part of the Agreement nor as a limitation on the scope of the particular sections to which they refer.

Please indicate your agreement with these terms and conditions by signing and dating the original and two (2) copies of this Letter Agreement returning the original and a copy to me.

ACCEPTED AND AGREED TO:

CEDAR CHEMICAL CORPORATION

By: Ron Cheves
Ron Cheves
Vice President

Very truly yours,

RHONE-POULENC INC.

By: Jean Pierre Dal Pont
Jean-Pierre Dal Pont
Vice President of
Technical Services

Date: 9.5.86

Tackle® is a registered trademark of Rhone-Poulenc Inc.

RHÔNE-POULENC INC.

P.O. Box 125 Black Horse Lane - Monmouth Junction New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

August 1, 1986

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Vice President
Cedar Chemical Corporation
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24th Floor
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Cedar will modify an existing production facility for a maximum charge of \$75,000 to produce a minimum of 684,000 pounds of RP-15 at a nominal rate of 10,000 pounds per day (100% basis). The maximum charge of \$75,000 will be invoiced monthly and payment shall be made within 10 days of the date of the invoice. The amount of such invoices shall be equal to the expenditures actually incurred by Cedar for modification and installation charges related to Cedar's existing equipment. In order to verify Cedar's expenditures, Cedar shall make said invoices available to Rhone-Poulenc Inc. upon request.

The production rate will be guaranteed by Cedar, following a 7 day process confirmation start-up period, to be attended by Rhone-Poulenc personnel.

Production of 684,000 pounds is projected to be complete in 76 days. Additional production beyond 684,000 pounds, if desired, will be continued for 14 days and will be charged at the rate of \$.35 per pound of RP-15 (100% basis).

Production will commence on October 1, 1986, following a 6 week period required for plant preparation.

EXHIBIT A



ADEQ0017705

Total processing charges for 90 days of production will be \$435,000, to be paid in three equal payments during the 90 day campaign. Additional production during the 90 day period will be charged at the rate of \$.35 per pound. Production time requested, beyond the 90 day period, will be charged for at the rate of \$175,000 per month - pro rata per day.

Nitration - Neutralization - RP-10

Cedar will modify an existing production facility for a maximum charge of \$425,000 to produce a minimum of 600,000 pounds of RP-10 at a nominal rate of 9,000 pounds per day (100% active basis). The maximum charge of \$425,000 will be invoiced monthly, and payment shall be made within 10 days of the date of the invoice. The amount of such invoices shall be equal to the expenditures actually incurred by Cedar for the purchase of equipment. Such equipment shall belong to Cedar except for a glass-lined reactor which shall belong to Rhone-Poulenc Inc. In order to verify Cedar's expenditures, Cedar shall make said invoices available to Rhone-Poulenc Inc. upon request.

The production rate will be guaranteed by Cedar following a 7 day process confirmation start-up period, to be attended by Rhone-Poulenc personnel.

Production of 600,000 pounds is projected to be complete in 73 days. Additional production beyond 600,000 pounds, if desired, will be continued for 17 days and will be charged at the rate of \$.35 per pound.

Production will commence as early as January 15, 1987 but no later than February 15, 1987, following a 10-12 week period required for plant preparation. Rhone-Poulenc Inc. shall provide Cedar with 30 days advance written notice of the actual commencement of production.

Total processing charges for 90 days of production will be a minimum of \$550,000, to be paid in three equal payments during the campaign. Additional production, during the 90 day period, will be charged for at the rate of \$.35 per pound of RP-10 (100% basis). Production time requested beyond the 90 day period will be charged for at the rate of \$200,000 per month - pro rata per day.

General Provisions

Cedar will secure necessary permits required to begin and continue production. Rhone-Poulenc Inc shall provide any necessary information or assistance in the procurement of said permits; and the status of said permits will be reviewed every 30 days by Cedar's and Rhone-Poulenc Inc.'s appropriate personnel. Cedar shall also advise Rhone-Poulenc Inc. in writing as to the need of any permit. If a 30 or more day delay occurs in processing any permit or if Cedar fails to procure a necessary permit, Rhone-Poulenc Inc. shall have the right to terminate this Agreement upon written notice to Cedar. However, Rhone-Poulenc Inc shall forfeit any monies paid prior to the date of termination.

Wastes will be processed by Cedar, if necessary, and sent off site for disposal with Rhone-Poulenc being charged the actual commercial rate. The costs of such waste processing is included in the over-all processing charge. Cedar shall provide Rhone-Poulenc Inc. with a detailed statement concerning its methods of waste disposal and shall verify that such methods comply with existing Federal and State environmental laws. Prior to the disposition of any wastes, the parties shall mutually agree upon the waste disposal site. In the event Cedar can process wastes through the biological system at West Helena, Cedar will share the savings with Rhone-Poulenc Inc.

Production facilities prepared for this project will be maintained by Cedar and will be made available to Rhone-Poulenc for additional production campaigns during a three year period. Prices will be approximately the same as provided in the first campaign with appropriate escalators to be provided in a subsequent Contract between the parties. Cedar will require advance notice of intent by June 1, 1987 to produce and volumes required. At the time of notification, Rhone-Poulenc Inc. shall advise Cedar whether to proceed only with the coupling step or also with the nitration and neutralization steps.

Cedar will be responsible for raw material consumption following the start-up process confirmation period. However, Cedar shall pay for the loss of any raw materials as a result of its negligence or the failure of equipment. In the event material is not in accordance with specifications, Cedar shall make a good faith effort to reprocess the material in order to comply with specifications.

Rhone-Poulenc will provide containers for shipment of product FOB West Helena, Arkansas.

Rhone-Poulenc will provide all raw materials and bear the cost of all waste disposal.

Notwithstanding this Letter Agreement, it is also understood that all of the terms and conditions contained herein will be incorporated into a formal Contract which will be executed no later than August 29, 1986. The Contract will also make provision for additional terms and conditions covering such items as: indemnities, warranties, insurance etc.

Please indicate your agreement with these terms and conditions by signing and dating the original and two copies of this Letter Agreement returning the original and a copy to me.

Very truly yours,

RHONE-POULENC INC.

BY: Jean Pierre Del Pont
Jean-Pierre Del Pont
Vice President of
Technical Services

ACCEPTED AND AGREED TO:

CEDAR CHEMICAL CORPORATION

BY: Ron Cheves
Ron Cheves
Vice President

DATE: 8.1.86

Tackle^(s) is a registered trademark of Rhone-Poulenc Inc.

EXHIBIT A

RP-15 SPECIFICATION

JPD
RC

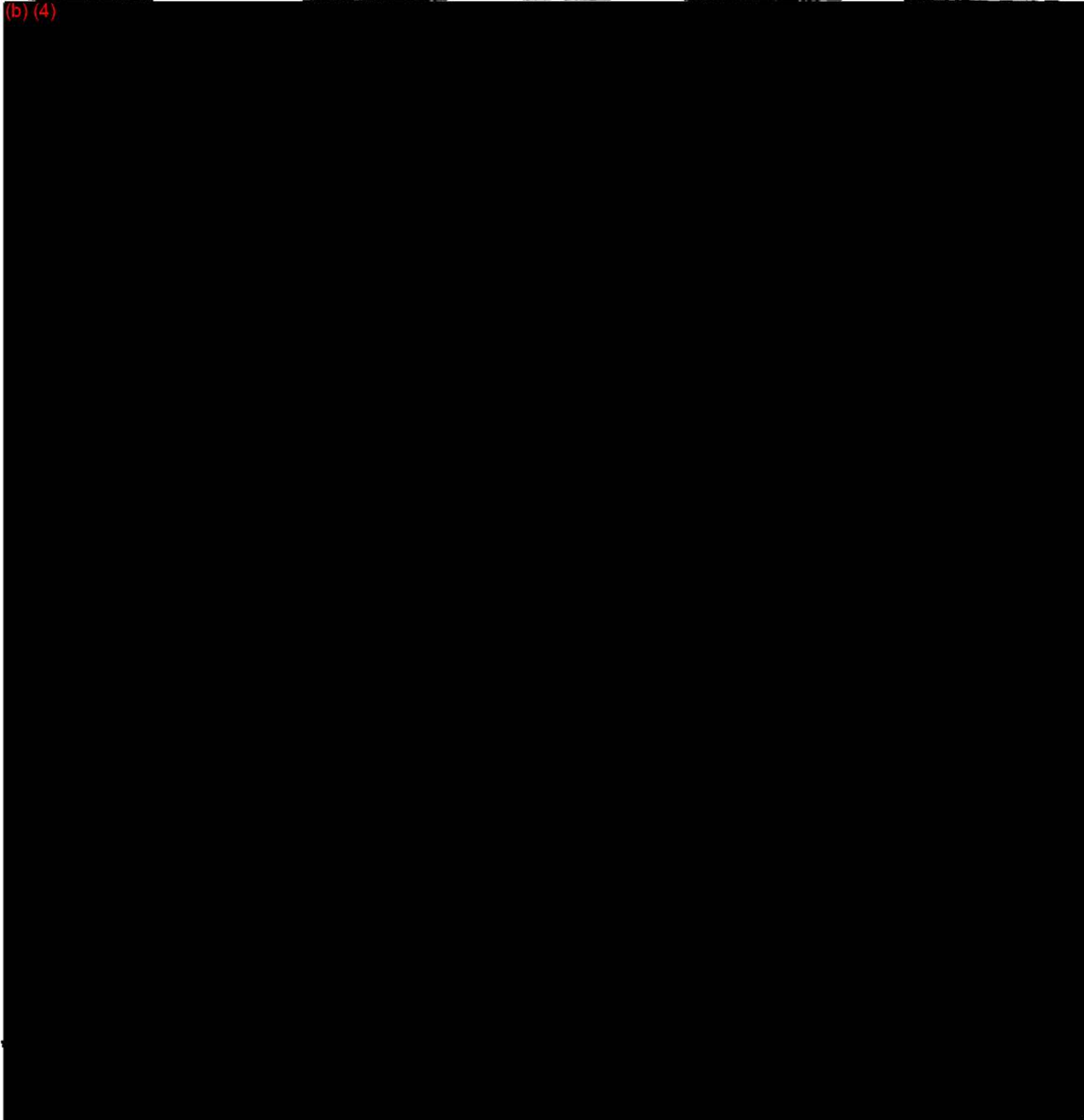
RP-15	90.5% (minimum)
Light isomer	5.2% (maximum)
Heavy isomer	1.0% (maximum)
Water	2000 ppm (maximum)

1986-87 TACKLE 2AS CAMPAIGN - MANUFACTURING SPECIFICATIONS

JPM
RC

RP No/Other	2AS Basis* Max. Mfg. Specification	Normally Expected Value	Present Confidential Stmt. of Form.	Proposed Confidential Stmt. of Form.
-------------	--	-------------------------------	---	--

(b) (4)





Spec
F

Ashland Chemical Company

DIVISION OF ASHLAND OIL, INC.

INDUSTRIAL CHEMICALS & SOLVENTS DIVISION • P.O. BOX 3718, COLUMBUS, OHIO 43218 • (614) 889-1333

REPLY TO
831 Fifth Avenue South
Kent, Washington 98032
Phone: (206) 832-3631

ACETIC ANHYDRIDE

Physical Properties

Formula	$\text{CH}_3\text{COOCOCH}_3$
Formula Molecular Wt.	102.09
Specific Gravity 20/20°C	1.0830
Boiling Point 760 mm	139°C
Vapor Pressure mm Hg	4 @ 20°C
Freezing Point	-74.1°C
Solubility: in water/water in	Decomposes
Pounds per gallon @ 20°C	9.01
Flash Point ASTM D1310	136°F

EXHIBIT D

ADEQ0017705

Divisional Technical Center
Diamond Shamrock Corporation
P.O. Box 191
Painesville, Ohio 44077
216-357-3811



Diamond Shamrock

Muscle Shoals Plant 45% Liquid Caustic Potash Commercial Grade

(1974)

Technical Bulletin

1581-A

<u>Component</u>	<u>Basis</u>	<u>Typical Analysis⁽¹⁾</u>
Total Alkalinity (as KOH)	Wt. %	45.7
Hydroxide Alkalinity (as KOH)	Wt. %	45.7
K ₂ CO ₃	Wt. %	0.05
KCl	Wt. %	0.0035
KClO ₃	Wt. %	≤ 0.0001
K ₂ SO ₄	ppm by wt.	≤ 10
Fe	ppm by wt.	0.5 ⁽²⁾
Na	ppm by wt.	800
Ni	ppm by wt.	≤ 0.1
Hg	ppm by wt.	≤ 0.05
Heavy Metals (as Pb)	ppm by wt.	≤ 5
As	ppm by wt.	≤ 1

Typical Analysis

Not to be used as a specification

Notes:

1. Meets Food Chemicals Codex and U.S. Pharmacopeia specifications.
2. Iron value applies to material shipped only in lined containers.

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JUN 6 1985

JU1HB

EXHIBIT D

PURCHASING

All information, recommendations and suggestions appearing in this bulletin concerning the use of our products are based upon tests and data believed to be reliable; however, it is the user's responsibility to determine the suitability for his own use of the products described herein. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by Diamond Shamrock Corporation as to the effects of such use or the results to be obtained; nor does Diamond Shamrock Corporation assume any liability arising out of use by others of the products referred to herein. Nor is the information herein to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations. Nothing herein contained is to be construed as permission or as a recommendation to infringe any patent.

ADEQ0017705

CAUSTIC POTASH, LIQUID (POTASSIUM HYDROXIDE - KOH)

LOW CHLORIDE GRADE

SPECIFICATIONS

TOTAL ALKALINITY
CALCULATED AS KOH

45-52% BY WT.

K_2CO_3

0.2 % BY WT. (MAX.)

NaOH

0.25% BY WT. (MAX.)

KCL

50 PPM (MAX.)

SiO_2

20 PPM (MAX.)

$KClO_3$

3 PPM (MAX.)

K_2SO_4

10 PPM (MAX.)

Fe

3 PPM (MAX.)

Ca

3 PPM (MAX.)

Hg

0.5 PPM (MAX.)

Mg

3 PPM (MAX.)

CAS REGISTRY NO. 1310-58-3

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ISSUED MAY, 1982

MAR 24 1983

12/82

EXHIBIT D

(Continued on reverse side)

ADEQ0017705

Divisional Technical Center
Diamond Shamrock Corporation
P.O. Box 191
Painesville, Ohio 44077
216/357-3811

Specs →

50% Liquid Caustic Soda
Diamond Brand



Diamond Shamrock

(1158)

Technical Bulletin

1769

Component	Basis	Sales(1) Specification	
Total Alkalinity as Na ₂ O	Wt. %	38.7	Min.
Hydroxide Alkalinity as NaOH	Wt. %	50.0	Min.
Na ₂ CO ₃	Wt. %	0.15	Max.
NaCl	Wt. %	1.10	Max.
NaClO ₃	Wt. %	0.12	Max.
Na ₂ SO ₄	ppm by wt.	400	Max.
Fe	ppm by wt.	9.0	Max.
Cu	ppm by wt.	0.2	Max.
Ni	ppm by wt.	2.0	Max.
Hg	ppm by wt.	0.05	Max.
Heavy Metals (as Pb)	ppm by wt.	15	Max.
As	ppm by wt.	1.5	Max.

Notes:

1. Meets Food Chemicals Codex and U.S. Pharmacopeia specifications.
2. Iron value applies to material shipped only in lined containers.

F2HB

EXHIBIT D

PURCHASING
FEB - 6 1984
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All information, recommendations and suggestions appearing in this bulletin concerning the use of our products are based upon tests and data believed to be reliable; however, it is the user's responsibility to determine the suitability for his own use of the products described herein. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by Diamond Shamrock Corporation as to the effects of such use or the results to be obtained; nor does Diamond Shamrock Corporation assume any liability arising out of use by others of the products referred to herein. Nor is the information herein to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations. Nothing herein contained is to be construed as permission or as a recommendation to infringe any patent.



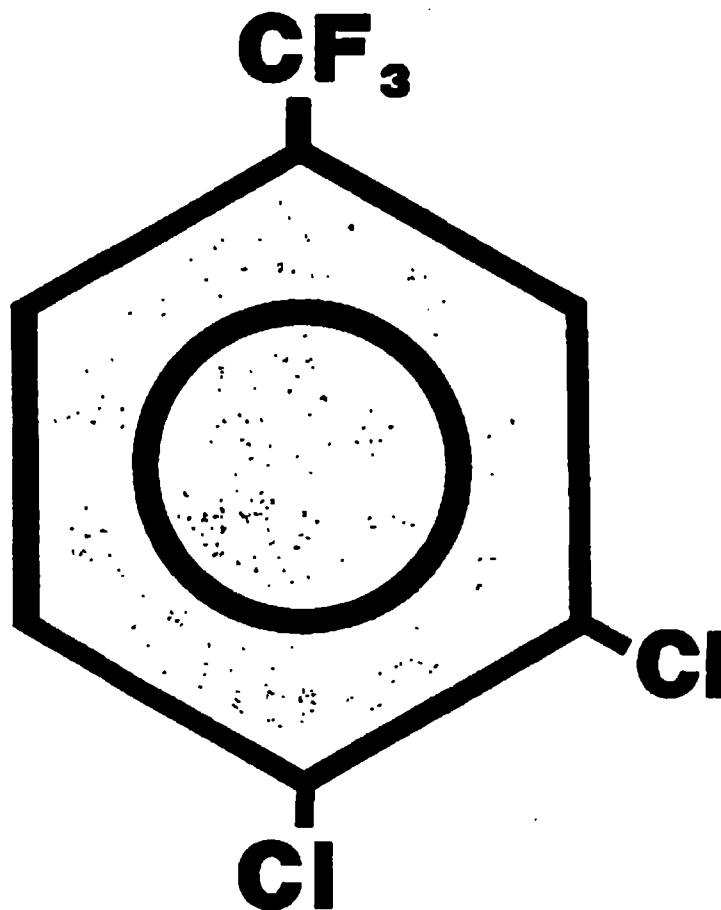
Occidental Chemical Corporation

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FEB 4 1985

PURCHASING

Industrial & Specialty Chemicals Division



3,4-DICHLOROBENZOTRIFLUORIDE

3,4-Dichlorobenzotrifluoride is a clear, colorless liquid with a faint organic odor. It is useful as a chemical intermediate in the manufacture of pesticides and other products.

The product is one of a family of products offered by the Industrial and Specialty Chemicals Division based on a history of research and development of benzotrifluoride derivatives.

EXHIBIT D

3,4 DICHLOROBENZOTRIFLUORIDE

Specifications:

Appearance: Clear, colorless liquid
Assay: 99.0% minimum
Other: 0.1% maximum low boilers
0.1% maximum high boilers
0.8% other DCBTF isomers

Molecular Weight:

202.99

Formula:

$C_6H_2Cl_2F_3$

Physical Properties:

Melting Point	- 12.4°C
Boiling Point	173.5°C
Specific Gravity (25°C)	1.478 (12.3 lbs/gal)
Flash Point (Tag Closed Cup)	170°F
Vapor Pressure (mm Hg)	2 mmF 24.6°C 22 mmF 71.8°C 216 mmF 10.1°C 694 mmF 169.9°C
Refractive Index, n_{25}^D	1.4736

Shipping Containers

Containers (Approximate Capacities)

	Gallons	Pounds
Tank Trailer	3,250	40,000 (partial load)
Drums: (non-returnable)	55	650 (net) 685 (gross)



Shipping Information:

Domestic Shipment Description

DOT Name: Combustible Liquid, N.O.S.
Technical Name: 3,4-Dichlorobenzotrifluoride
Hazard Class: Combustible Liquid
Label Required: None
Identification No.: NA 1993

Shipping Document Description

DOT Rail:
Combustible Liquid, N.O.S.,
(3,4-Dichlorobenzotrifluoride), NA 1993,
Placarded Combustible

DOT Highway:
Combustible Liquid, N.O.S.,
(3,4-Dichlorobenzotrifluoride), NA 1993,
Chemicals NOI

Drum Quantities: (non-regulated)

U.S. Department of Transportation Requirements

MARKING

Packages of 3,4-Dichlorobenzotrifluoride having rated capacities of 110 gallons or less do not require marking (49 CFR 172.118[a]). Bulk shipments in portable tanks, cargo tanks and tank cars must be marked with the assigned DOT identification number, 1993, on orange panels or placards (49 CFR 172.326, 172.328, 172.330 and 172.332).

LABELING

A DOT hazard warning label is not required on packages containing 3,4-Dichlorobenzotrifluoride (49 CFR 172.400[b][9]).

PLACARDING

Cargo tanks, tank cars and portable tanks containing 3,4-Dichlorobenzotrifluoride being offered for transportation must carry the numbered DOT Combustible placard as illustrated below. Freight containers, motor vehicles and rail cars carrying 3,4-Dichlorobenzotrifluoride packed in drums of 110 gallons or less are exempt from placarding (49 CFR 172.504 Table 2, note 3).



DOT Placard for bulk shipments

The Code of Federal Regulations, Title 49, should be consulted for additional information, exceptions or alternatives for marking, labeling and placarding full and empty containers. The above references cite general transportation rules.

PRODUCT LABEL

3,4-DICHLOROBENZOTRIFLUORIDE (3,4-DCBTF)

CAUTION!

COMBUSTIBLE LIQUID
MAY BE HARMFUL IF INHALED OR ABSORBED THROUGH SKIN
MAY CAUSE EYE AND SKIN IRRITATION



OCC SUGGESTED FIRE HAZARD RATING

FOR INDUSTRIAL USE ONLY

FLASH POINT (TAG C.C.)
170°F

PRECAUTIONS

- Keep container closed
- Keep away from heat and open flame
- Insure adequate ventilation or use an organic acid vapor mask.
- Avoid contact with eyes, skin, and clothing.
- Avoid breathing vapor
- Wash thoroughly after handling
- Use of goggles and rubber gloves is suggested
- **DO NOT REUSE THIS CONTAINER** Toxic and explosive product residues or vapors may remain in this container. All labeled precautions **MUST** be observed. Containers should be disposed of in a manner meeting government regulations.
- Do not apply air pressure, puncture or weld on or near this container. Be safe — keep away from heat, sparks or flames.
- **PRODUCT DISPOSAL** Product should be completely removed from this container. Material that cannot be used or chemically reprocessed should be disposed of in a manner meeting government regulations.

HANDLING & STORAGE

- Store in an NFPA Class II area.
- IN CASE OF:**
 - FIRE**—Use water spray, foam, dry chemical or CO_2 .
Use air supplied respirator or full protective equipment.
Fire may liberate toxic gases.
 - SPILL**—Contain spill and pump into drum. Soak up small spill with sand, earth or commercial absorbents and transfer into a suitable container.
Notify authorities if material is spilled into a sewer or regulated waters. Do not use water.
- **EMERGENCY PHONE**
CHEMTREC 1-800/424-9300

+ FIRST AID +

- In case of contact, immediately remove contaminated clothing and shoes. Flush contaminated skin with plenty of water.
- In case of eye contact, immediately flush eyes with a directed stream of water for at least 15 minutes, forcibly hold eyelids apart to ensure complete irrigation of all eye and lid tissue. Call a physician.
- If inhaled, remove to fresh air.
- If swallowed, do not induce vomiting. Call a physician.
- Wash clothing before reuse.

NA 1993
CAS No. 328-84-7



Occidental Chemical Corporation
Industrial & Specialty Chemicals Division

Net Weight 295 Kg.
650 lb.



Occidental Chemical Corporation
Industrial & Specialty Chemicals Division

Occidental Chemical Center, 360 Rainbow Boulevard South
Box 728 Niagara Falls New York 14302 716/286-3000

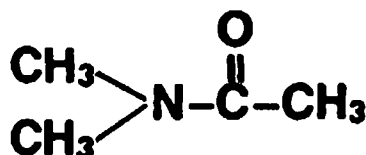
IMPORTANT! The information presented herein, while not guaranteed, was prepared by technical personnel and is true and accurate to the best of our knowledge. No warranty or guaranty, express or implied, is made regarding performance, stability or otherwise. This information is not intended to be all-inclusive as the manner and conditions of use, handling, storage and other factors may involve other or additional safety or performance considerations. While our technical personnel will be happy to respond to questions regarding safe handling and use procedures, safe handling and use remains the responsibility of the customer. No suggestions for use are intended as, and nothing herein shall be construed as, a recommendation to infringe any existing patents or to violate any Federal, State or local laws.

EXHIBIT D

ADEQ0017705

DIMETHYLACETAMIDE

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SEP 02 1983



Stability—Dimethylacetamide is stable up to its atmospheric boiling point in the absence of acidic and alkaline materials. It distills essentially unchanged with no color or acid formation. Above 350 C (662 F), degradation to dimethylamine and acetic acid occurs.

N,N-Dimethylacetamide (DMAC) is a powerful and versatile industrial solvent featuring wide organic and inorganic solubility, water miscibility, high boiling point, low freezing point and good stability. DMAC is not "photochemically reactive" as defined in Los Angeles County's Rule 66, Section k. Some states control all volatile organic compounds irrespective of their photochemical reactive nature. Consult the appropriate state pollution control regulations.

The Chemical Abstracts index name for DMAC is acetamide, N,N-dimethyl-, (CAS Registry Number 127-19-5). Du Pont offers high purity DMAC for industrial use only. Table I lists specifications and typical analyses of Du Pont DMAC. Du Pont also sells a closely related amide solvent, N,N-dimethylformamide (DMF).

PROPERTIES

Solvency—DMAC is an essentially neutral, non-hydroxylic, aprotic solvent with a high dielectric constant. Its solvent power is due in part to having three pairs of available electrons for hydrogen bonding.

Solubility—DMAC is completely miscible in water, ether, esters, ketones and aromatic compounds. DMAC is generally soluble in unsaturated aliphatic compounds and more soluble than DMF in saturated aliphatics.

TABLE I
SPECIFICATIONS AND TYPICAL ANALYSES
DU PONT DIMETHYLACETAMIDE
TECHNICAL GRADE

	Specifi- cations	Typical Analyses*
Water, %	0.05 max.	0.02
Color (APHA)	10 max.	2
Conductivity, 25 C (77 F) 20% aq sol'n		
micromhos/cm	25 max.	12
μS/m	2500 max.	1200
Distillation range for 1 to 95 vol %, (at 760 mm Hg and includes 166.0 C ± 0.2 C), C	2.0 max.	0.6
pH at 25 C (77 F), 20% aq sol'n	4.0-7.0	4.7

*This column gives typical analyses based on historical production performance. Du Pont does not make any express or implied warranty that all future production will demonstrate or continue to possess these typical properties.

Hydrolysis—DMAC shows only a slight tendency to hydrolyze in aqueous solutions at elevated temperatures. The hydrolysis rate increases in the presence of acids or alkalis.

NOTICE: DMAC is harmful if inhaled or absorbed through the skin. See Personal Safety and First Aid on page 2 and the Caution For Distributors, Resellers, Formulators and Users of DMAC on page 6.

The information set forth herein is furnished free of charge and is based on technical data that Du Pont believes to be reliable. It is intended for use by persons having technical skill and at their own discretion and risk. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information. Nothing herein is to be taken as a license to operate under or a recommendation to infringe any patents.

Solvolysis—Like other aprotic solvents (e.g. tetrahydrofuran, dimethylformamide, dimethyl sulfoxide), DMAC is capable of influencing substitution and elimination reactions. DMAC strongly stabilizes cations through dipole-cation interactions and minimizes the electrostatic attraction between anion and cation. Its electrical insulating action retards ion aggregation.

Hazardous Chemical Reactions—With halogenated compounds, DMAC acts as a dehydrohalogenation reagent. With certain highly halogenated compounds like carbon tetrachloride or benzene hexachloride, the reaction is highly exothermic and may become violent, particularly in the presence of iron. It is recommended that mixtures of DMAC and halogenated compounds never be used or stored in metal containers without first testing the particular system. Mixtures of DMAC and sodium hydride have been reported to generate heat and should be considered potentially hazardous.

Extreme caution must be exercised if strong oxidizing agents are to be mixed with DMAC. Use of DMAC as a reaction solvent is known to increase the rate and heat evolution of many organic reactions. It is therefore recommended that any evaluation of DMAC be initially carried out on a small scale, with gradual scale-up to thoroughly familiarize operating personnel with the characteristics of a particular reaction. Furthermore, once safe operating conditions have been established, care must be taken to see that they are not altered without first evaluating the new conditions on a small scale.

PERSONAL SAFETY AND FIRST AID

Health Hazards

DMAC is capable of producing systemic injury when inhaled or absorbed through the skin in sufficient quantities over a prolonged period of time. The principal effect is cumulative damage to the liver. DMAC has a low order of acute toxicity when swallowed or upon brief contact of the liquid or vapor with the eyes or skin. The LD₅₀ (oral, male rats) for DMAC is 5809 mg/kg.

Although DMAC is not a skin sensitizer, it is irritating to the skin and eyes. DMAC has shown embryotoxic properties in test animals. See the paragraph below on Embryotoxicity.

The U.S. Department of Labor (OSHA) has ruled that an employee's exposure to dimethylacetamide in any 8-hour work shift of a 40-hour work week shall not exceed a time-weighted average of 10 ppm DMAC vapor in air by volume or 35 mg of DMAC per cubic meter of air. They also caution that, since both the liquid and vapor of DMAC are capable of penetrating the skin and mucous membranes, control of vapor inhalation alone may

not be sufficient to prevent absorption of an excessive dose (29 CFR 1910.1000 Air Contaminants)*.

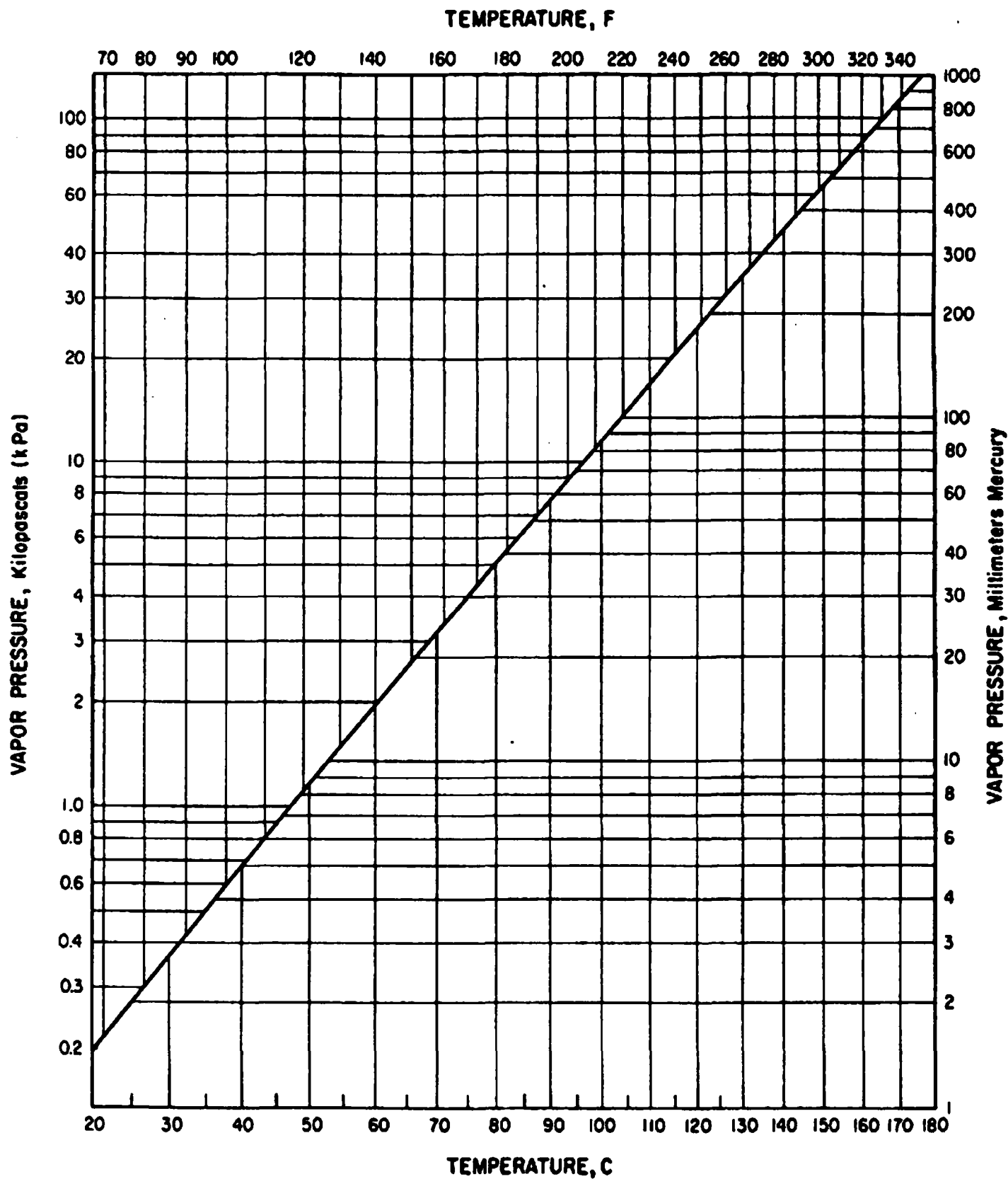
**TABLE II
PROPERTIES* OF
DIMETHYLACETAMIDE (DMAC)**

Molecular weight	87.12
Boiling point (760 mm Hg), C	166.1
F	331
Freezing point, C	-20
F	-4
Vapor pressure, 25 C (77 F), mm Hg	2.0
(See Figure 1) psia	0.04
kPa	0.27
37.8 C (100 F), mm Hg	4.4
psia	0.09
kPa	0.59
Density, 15.6 C (60 F), g/mL (Mg/m ³)	0.945
(See Figure 2) lb/gal	7.88
Viscosity, 25 C (77 F), cP (mPa·s)	0.92
Surface tension, 30 C (86 F), dyn/cm (mN/m)	32.43
Refractive index, n _D ²⁵	1.4356
Heat of vaporization (at bp), kcal/g·mol	10.36
Btu/lb	214
kJ/kg	498
Heat of combustion (-ΔH _c), 20 C (68 F)	
kcal/g·mol	608
Btu/lb	12,562
kJ/kg	29.20
Thermal conductivity, 22.2 C (72 F)	
kcal·m/m ² ·h·C	0.1579
Btu·ft/ft ² ·h·F	0.1005
W/m·K	0.1742
Flash point (TOC), C	70
F	158
(TCC), C	63
F	145
Autoignition temperature, C	490
F	914
Flammability limits in air, vol %	
lower, 100 C (212 F)	1.8
200 C (392 F)	1.5
upper, 160 C (320 F)	11.5
Critical temperature, C	385
F	725
Critical pressure, atm	39.7
MPa	4.02
Dielectric constant, ε, 10 kHz, 25 C (77 F)	37.8
Dipole moment, μ, 20 C (68 F) Debye units	4.60
Solubility parameter, δ	10.8
Hydrogen-bonding index, β	6.6

*These property data are drawn from various DuPont and literature sources. DuPont does not make any express or implied warranty that the commercial product will have these properties.

* Due to changing governmental regulations such as those of the Department of Transportation, Department of Labor, U.S. Environmental Protection Agency and the Food and Drug Administration, references herein to governmental requirements may be superseded. Each user should consult and follow the current governmental regulations, such as Hazard Classifications, Labeling, Food Use Clearances, Worker Exposure Limitations and Waste Disposal Procedures for the up-to-date requirements for dimethylacetamide.

FIGURE 1 VAPOR PRESSURE OF DIMETHYLACETAMIDE



Embryotoxicity

In laboratory tests, application of DMAC to the skin of pregnant rats has caused fetal deaths when the dosages were close to the lethal dose level for the mother. Embryonal malformations have been observed at dose levels 20% of the lethal dose and higher. However, embryotoxicity has not been reported at dose levels comparable to the inhalation dose a woman could receive from air contaminated with DMAC to the maximum level allowed by the Department of Labor. (See Health Hazards.) Women of childbearing potential may be employed in operations where the air concentration is within the limits set by the Department of Labor and there is no opportunity for liquid contact.

Safety Precautions

Adequate ventilation must be provided by keep DMAC vapor concentrations within the time-weighted average of 10 ppm prescribed by the Department of Labor. Contact of DMAC liquid or mixtures containing DMAC with the eyes, skin, and clothing should be avoided. If contact is unavoidable, appropriate personal protective equipment, including chemical safety goggles, butyl rubber gloves, rubber or neoprene-coated clothing, and respirators supplied with fresh air should be worn.

First Aid

If inhaled, remove patient to fresh air. If breathing has stopped, give artificial respiration, preferably mouth to mouth. If breathing is difficult, give oxygen. Call a physician.

In case of contact with DMAC liquid, immediately flush eyes or skin with water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Wash clothing before reuse. Destroy contaminated shoes.

Personal Protective Equipment

The following personal protective equipment should be available and worn as needed:

- Hard hat with brim
- Safety spectacles (side shields preferred)
- Chemical splash goggles
- Full length face shield
- DMAC-resistant butyl rubber gauntlet gloves^a
- DMAC-resistant butyl rubber apron
- DMAC-resistant butyl rubber boots
- Appropriate respiratory protection^a

^a Available from NORTON SAFETY PRODUCTS DIVISION, 2000 Plainfield Pike Cranston, RI 02920

^a See "A Guide to Industrial Respiratory Protection" HEW Pub. No. (NIOSH) 76-189

A full DMAC-resistant butyl rubber suit (jacket, pants and hood) with breathing air supply will provide protection from DMAC contact and inhalation. This suit must be worn not only in emergencies but also when performing work where there is substantial possibility of direct repeated contact with DMAC.

Neoprene is abrasion resistant, and therefore, neoprene gloves are recommended for DMAC area operations. However, neoprene coated cotton gloves offer only fair protection from DMAC. Neoprene coated gloves which have contacted liquid DMAC should be discarded.

Butyl rubber gloves such as Norton Style B-161R or B-324R^a are resistant to DMAC solvency and offer good protection from DMAC. Butyl rubber gloves should be worn in all operations where contact with liquid DMAC is likely. These gloves are designed to protect against accidental contact and are not intended for routine immersion in DMAC or continuous handling of DMAC-wetted parts. Butyl rubber is not very resistant to cuts or abrasion. Therefore, butyl gloves should be frequently inspected and discarded when they show cuts, tears, pinholes or signs of wear.

Design of DMAC facilities should avoid routine gloved contact with DMAC liquid or parts wetted with DMAC.

Special Safety Facilities

The following safety facilities should be readily accessible in all areas where DMAC is handled or stored:

- safety showers—or water hoses connected to spigots with quick opening valves which stay open
- eye wash fountains—or other means for washing the eyes with a gentle flow of filtered, moderately warm tap water.

Determination of DMAC in Air

The measurement of DMAC in air can be accomplished by passing a known amount of air through water in a gas-scrubbing vessel and analyzing the solution chemically or by gas chromatography. Chemical analysis involves hydrolysis to dimethylamine. For determination by gas chromatography, the solution may be injected directly into a suitable column. An acceptable gas chromatography technique for DMAC is NIOSH Method No. S254 (NIOSH Manual of Analytical Methods, Volume 3, U.S. Department of Health, Education and Welfare, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health). The NIOSH Method uses adsorption on silica gel followed by desorption with methanol.

DMAC in air can also be measured by infrared absorption or by colorimetric analysis of a pyrolyzed air

FIGURE 2 DENSITY OF DIMETHYLACETAMIDE

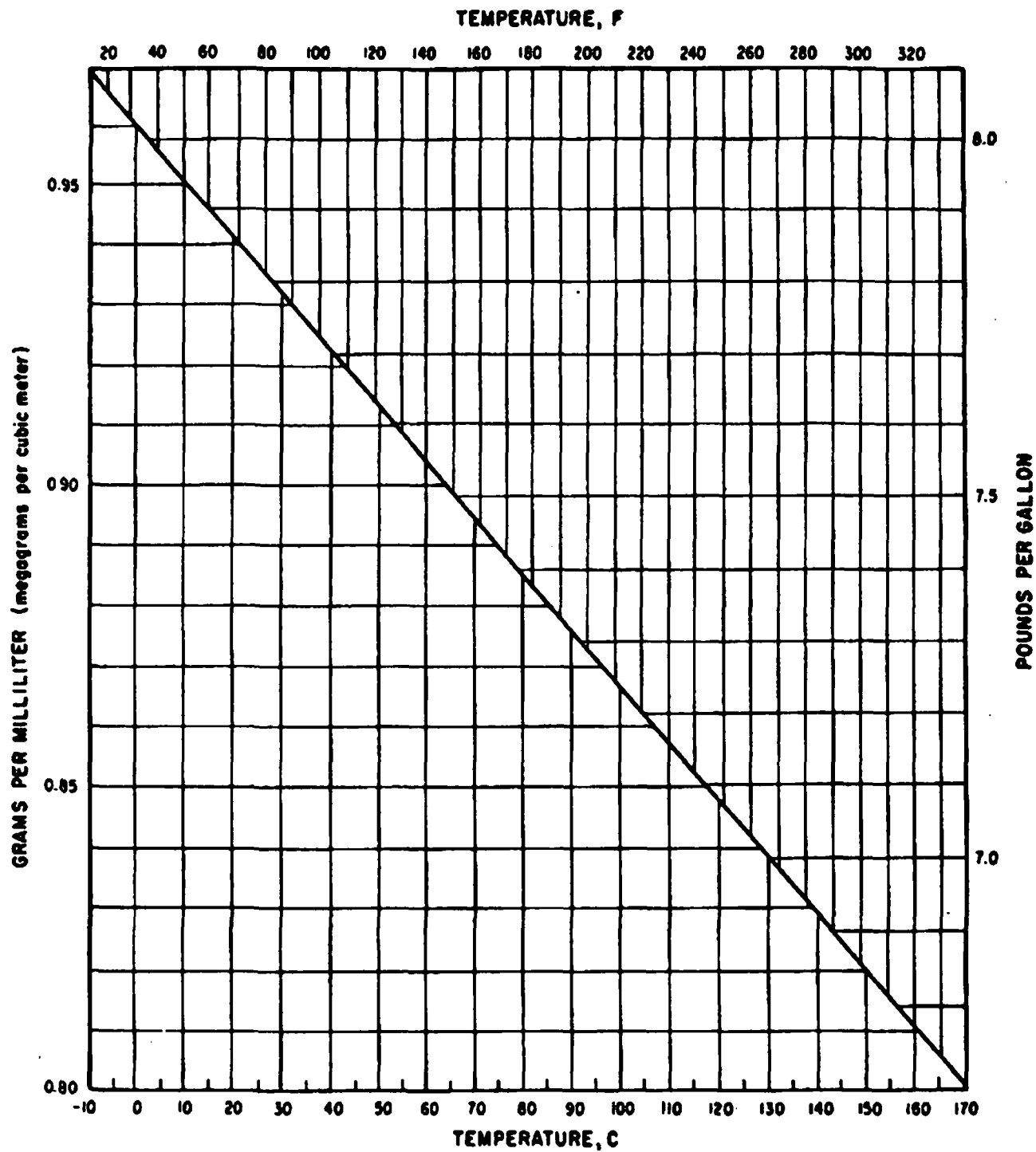


EXHIBIT D

sample. The colorimetric technique measures concentrations of 5-80 ppm DMAC in air using the MSA Universal Tester (complete with Air Sampling Pump, Pyrolyzer and Part Number 91624 Organic Nitrogen Detector Tubes available from Mine Safety Appliances Company, 408 Penn Center, Pittsburgh, PA 15235)

USES

DMAC is a uniquely versatile and powerful solvent with the following properties

- Wide Liquid Range
- Thermal Stability
- Chemical Stability
- Water Miscibility
- Wide Organic and Inorganic Solvency
- High Polarity

Many hard-to-dissolve materials are soluble in DMAC. In some cases, the material is dissolved in a relatively small amount of DMAC and then the mixture is taken up in a large volume of second solvent. Sometimes the final solution contains only a small percentage of DMAC. But even when DMAC is only a minor ingredient in the solution, the cautionary information covered in the PERSONAL SAFETY and FIRST AID section above still applies.

DMAC in Mixtures and Consumer Products—DMAC is sold by Du Pont for industrial use only. It should *not* be used in consumer products.

In combinations of DMAC with other solvents and chemicals, the partial vapor pressure of DMAC will be lower than for pure DMAC and the rate of absorption through the skin may be slower than for pure DMAC. Nevertheless, it must be recognized that even when DMAC is a relatively minor component of a formulation, it may in some circumstances still contribute more than 10 ppm vapor to the air (exceeding the OSHA limit) and can still be absorbed through the skin in case of skin contact. This is especially pertinent if the formulation is spread in a thin film, over a large surface area having limited ventilation. Processing at elevated temperatures also requires special attention to adequate ventilation.

Other factors to be considered by formulators are whether the formulation or mixture containing DMAC is likely to be used by the general public or by women of childbearing age and whether spills or splashing of the product are likely to be encountered in normal use.

CAUTION: Distributors, resellers, formulators and users of DMAC and mixtures or products containing DMAC have the responsibility of providing adequate information on safety,

toxicity including embryotoxicity, and safe handling procedures to their employees and customers.

Resin and Polymer Solvent—DMAC's strong solvent action makes it particularly useful in the manufacture of films and fibers and as a booster solvent in coating and adhesive formulations. Polymers containing over 50% vinylidene chloride are soluble to 20% at elevated temperatures in DMAC. In many cases DMAC solutions have higher solids content at practical working viscosities, resulting in more economical formulations than is possible with lower cost but less powerful solvents. DMAC may be particularly useful for dissolving.

Polyacrylonitrile	Cellulose derivatives
Polyvinyl chloride	Styrenes
Polyamides	Linear polyesters
Polyimides	

Reaction Catalyst and Medium—DMAC is useful as a reaction medium because it is an excellent solvent for a variety of organic and inorganic compounds. Due to its high dielectric constant and solvating ability, DMAC may participate in the reaction mechanism and frequently the effect is catalytic. This often results in higher yields under less vigorous conditions than is possible with other solvents. The products frequently may be isolated by adding water to the reaction mixture. Typical of reactions that may be benefited by the use of DMAC are:

Elimination reactions such as dehydrohalogenation and dehydrogenation

Cyclizations

Halogenations

Preparation of nitriles

Alkylations

Interesterifications

Phthaloylations

Preparation of organic acid chlorides.

Crystallization and Purification Solvent—The unusual solvent power of DMAC has been found useful in the purification by crystallization of aromatic dicarboxylic acids such as terephthalic acid and p-carboxyphenylacetic acid. DMAC and dibasic acids form crystalline complexes containing two moles of the solvent for each mole of acid.

Electrolytic Solvent—The use of DMAC as a nonaqueous electrolytic solvent is promising because salts are moderately soluble in DMAC and appear to be completely dissociated in dilute solutions

STORAGE AND HANDLING

Persons handling DMAC in drums or in bulk quantities should be thoroughly familiar with DMAC hazards and safe handling practices. Refer to the Du Pont bulletin "Dimethylformamide (DMF)—Properties, Uses, Storage and Handling" for more detailed information on a product whose storage and handling requirements are similar to those of DMAC. This publication is available from any Du Pont Sales Office listed on the back page

Storage—DMAC is stored and handled in steel equipment and is usually handled at ambient temperatures. DMAC freezes at -20°C (-4°F). It is combustible and is thermally stable below 350°C (662°F) if uncontaminated

Aluminum or stainless steel equipment is recommended for handling DMAC where stringent color or iron contamination requirements are present. Mild steel is *not* recommended for high temperature service or for handling water solutions containing less than 83 percent DMAC. Many plastics are dissolved or softened by DMAC. White asbestos or TEFLON® TFE or FEP fluorocarbon resins are the preferred materials for gaskets and packing.

DMAC is hygroscopic and should be stored and handled in equipment designed to minimize moisture pickup.

Fire Hazard—DMAC is a Class II combustible liquid as defined by OSHA regulations. Its flash point, 63°C (145°F), is above the temperature at which it is normally stored and handled. However, DMAC should be stored and used in areas protected from flame, sparks, or excessive heat. Storage tanks and equipment should be electrically grounded.

In the event of fire, fire-fighting personnel should wear respiratory protection with breathing air supply and fight fires from upwind. Use water spray, foam, dry chemical, or carbon dioxide to extinguish fires.

Use caution in approaching an advanced or massive fire where confined DMAC is exposed to high heat or flame because in these circumstances this material may decompose rapidly and exothermically, and rupture the containing vessel.

Smoke and fumes from burning DMAC may be harmful upon inhalation or skin contact and, therefore, must be avoided.

When contact with smoke is not avoidable, wear full protective equipment with breathing air supply.

Engineering Control of Hazards—DMAC storage and handling facilities and operating areas should include the following key elements.

- Store and handle DMAC in totally enclosed equipment where possible, or in systems designed to avoid human contact. If contact cannot be avoided, personnel must wear proper personal protective equipment because DMAC is readily absorbed through the skin.
- Unloading and process facilities must isolate DMAC from chemicals with which it reacts violently. See Hazardous Chemical Reactions on page 2.
- DMAC is a combustible liquid and should be stored and used in areas protected from flames, sparks and excessive heat.
- Storage tanks and equipment should be electrically grounded.
- Electrical equipment, wiring and fixtures must meet the requirements of the National Electrical Code, Article 500.⁶
- Vents and pressure relief devices must be designed to handle pressure limitations and volumes of vapor that could be expected in emergency conditions.
- The process and storage tank vents should be located so that toxic, flammable vapors given off during fires or emergency conditions will not harm personnel or increase the fire hazard.
- Dikes, waste drains and collection facilities must be provided to contain possible spills or leaks during unloading and other transfers. DMAC spills, leaks and rinsings must be safely collected for later disposal or recovery.
- The storage and process layout must include provisions for more than one escape route in the event of fire, explosion or release of toxic vapors or liquid.
- The following safety facilities should be provided: readily accessible safety showers, fire extinguishers and other fire fighting equipment, water hydrants or hoses with spray nozzles for flushing and other emergency equipment such as chemical-proof suits and respiratory apparatus.
- In addition to engineering controls, thorough operator training, written operating instructions, safety rules, check lists, work permit and flame permit procedures are required to assure safe operation.

Spills—Spills or leaks of DMAC should be taken care of promptly. They should be contained where possible in a suitable collection system (tank or sump) designed to minimize personnel exposure and pollution. Spills or

⁶ Available from National Fire Protection Association, 470 Atlantic Ave., Boston, MA 02210.

leaks may be dammed with sand or earth. Dry sand or absorbents such as "Oil-Dri" may be used to soak up the liquid. Shovel wet absorbents into steel drums with lids for disposal. Wash down the area with water to remove final traces of DMAC. Wear full protective equipment including breathing air during clean-up operations. Rope off and evacuate areas affected by spills or leaks.

When disposal of DMAC is necessary, waste disposal measures must comply with all Federal, State and local air and water pollution regulations.

SHIPPING CONTAINERS

DMAC is available in 55-gallon (430-lb, 195-kg net) steel drums and in tank truck and tank car quantities.

Dimethylacetamide is regulated as a Hazardous Material by the Department of Transportation (DOT). The DOT Hazard Class is COMBUSTIBLE LIQUID (49 CFR 172.101, Hazardous Materials Table). Combustible Liquids are not regulated by DOT in containers having a capacity of 110 gallons or less (49 CFR 173.118a, Exceptions for combustible liquids). The DOT Identification Number is NA1993.

E. I. du Pont de Nemours & Co. (Inc.) • Wilmington, Delaware 19898

U.S. Sales Offices

CHARLOTTE NC 28230
6250 Fairview Rd., P.O. Box 30517
704-364-1550

CHICAGO IL 60631
O'Hare Plaza, Suite 760
5725 E. River Rd.
312-635-1220

CLEVELAND OH (Suburban)
6100 Rockside Woods Boulevard
Suite 255
Independence, OH 44131-2380
216-447-0868

HOUSTON TX 77056
Suite 1620, Post Oak Tower
713-877-8859

NEW YORK NY 10119
Rm 1129, Empire State Bldg
350 Fifth Ave
212-971-4000

PHILADELPHIA PA (Suburban)
308 E. Lancaster Ave
Wynnewood, PA 19096
215-696-2000

SAN FRANCISCO CA 94111
Suite 3110
50 California Street
415-391-7300

International Sales Offices

CANADA
Du Pont Canada Inc
Box 660
Montreal S. P.Q. H3C 2V1
514-861-3861

Du Pont Canada Inc
P.O. Box 2300
Streetsville Postal Station
Mississauga, Ontario
L5M 2J4
416-821-5570

LATIN AMERICA
Du Pont Co
Chemicals and Pigments
Latin America Sales Office
Brandywine Building
Wilmington, DE 19898
302-774-3403

EUROPE
Du Pont de Nemours
International S.A.
P.O. Box
CH-1211
Geneva 24, Switzerland
022-378111

ASIA-PACIFIC
Du Pont Far East Inc
Kowa Building No. 2
11-39 Akasaka 1-chome
Minato-ku
Tokyo 107, Japan
585-5511

Du Pont Far East Inc
Maxwell Road
P.O. Box 3140
Singapore 9051
273-2244



EXHIBIT D

Specs.

1983

BULLETIN 55A

Ethylene Dichloride

Chemicals



INDUSTRIES

High-purity ethylene dichloride (EDC) is produced by PPG Industries' Chemicals Group at Lake Charles, Louisiana. PPG is one of the world's largest producers of ethylene dichloride and ships to customers in tank cars, tank trucks, barges and ocean-going ships. A terminal in Chicago, Illinois, also makes tank car and tank truck shipments.

USES

Almost three-quarters of the ethylene dichloride produced in the U.S. is used as an intermediate for making vinyl chloride. Other important intermediate uses for EDC include making 1,1,1-trichloroethane, trichlorethylene, perchlorethylene, ethylene amines and polysulfide elastomers.

Ethylene dichloride is also used as a scavenging agent in tetraethyllead fuel additive compounds to prevent lead salts and lead oxide from depositing on engine cylinder walls.

Ethylene dichloride is an excellent solvent for greases, oils, fats and waxes. Due to the toxicity and flammability of EDC, other chlorinated solvents have displaced it in many applications. However, EDC has certain advantages and is still used for various solvent applications in chemical processing.

GOVERNMENT SPECIFICATIONS

PPG technical-grade ethylene dichloride meets the chemical and physical requirements of Military Specification MIL-E-10662, Ethylene Chloride, Technical, including the requirement that 95% minimum distills between 82.5°C and 84.5°C at 760 mm Hg.

HEALTH HAZARDS

Ethylene dichloride can be taken into the body by ingestion, inhalation or skin absorption. By any of these means it can be highly toxic. Acute poisoning may cause headache, dizziness, feelings of drunkenness, loss of consciousness, internal bleeding and death. Repeated exposures can bring on nausea, vomit-

ing, stomach pain, irritated mucous membranes, loss of appetite, liver and kidney failure and possible death. Numerous cases of ethylene dichloride poisoning, both fatal and nonfatal, have been documented by the National Institute for Occupational Safety and Health.

TYPICAL PROPERTIES

Chemical Names: Ethylene dichloride; ethylene chloride; 1,2-dichloroethane.

Chemical Formula: $\text{CH}_2\text{ClCH}_2\text{Cl}$

Molecular Weight: 98.97

Description: Ethylene dichloride is clear and colorless, but darkens slowly upon exposure to sunlight. It has an odor like chloroform. The liquid is mobile, volatile and flammable, and its vapor is toxic and flammable.

Boiling Point, °C	83
°F	181
Freezing Point, °C	-35.9
°F	-32.6
Flash Point, Tag open cup, °C	18
°F	65
Explosive Limits, volume % in air	6.2 to 15.9
Autoignition Temperature, °C	413
°F	775
Viscosity at 25°C, cps	0.78
Density at 20°C, pounds/gallon	10.5
Refractive Index at 20°C, n_D	1.444
Vapor Pressure at 20°C, mm Hg	62.0
Vapor Density, air = 1	3.42
Solubility at 25°C, g EDC/100 g water	0.84
at 20°C, g water/100 g EDC	0.16

Solubility: Ethylene dichloride is soluble in most organic solvents.

Reactivity: At moderate temperatures, ethylene dichloride is stable and resistant to oxidation. When moisture-free at ordinary temperatures, it does not corrode metals. But in contact with water at elevated temperatures, ethylene dichloride will corrode iron and certain other common metals.

Specification and typical analysis:

	Specification	Typical Analysis
Purity, minimum %	99.7	99.99
Color, maximum APHA	10	8
Appearance	clear, free of suspended matter	clear, free of suspended matter
Acidity, as HCl, maximum ppm	10	<1
Alkalinity, as NaOH, maximum ppm	10	—
Water, maximum ppm	200	50
Free Chlorine	none	0
Nonvolatile Residue, maximum ppm	100	1
Total Chlorinated Hydrocarbons, low-boiling, maximum ppm	500	75
Total Chlorinated Hydrocarbons, high-boiling, maximum ppm	500	100
Total Oxygenated Compounds, maximum ppm	300	0
C ₃ and Higher Compounds, maximum ppm	300	10
Total Soluble Iron, maximum ppm	0.5	0.5
Specific Gravity, 60°/60°F	1.261-1.264	1.262

When ethylene dichloride is ingested, the predominant characteristic is blood disorder, including clotting problems. With skin absorption or inhalation, the first effects are headache, weakness, eye irritation and nausea. Ethylene dichloride has been found in human milk and in the exhaled breath of nursing mothers who were exposed to the chemical.

Ethylene dichloride in contact with eyes or skin can result in local pain and irritation. Dermatitis may result from removal of natural skin oils and moisture, although permanent eye or skin injury has not been known to occur. If EDC is held close to the skin, as by contaminated clothing, severe irritation and moderate edema and necrosis may result.

Chronic Exposure

There are reports of two mild cases of human exposure for periods of two to five months which showed symptoms of central nervous system depression and gastrointestinal upset with nausea and vomiting. These persons recovered when removed from exposure. The liver and kidneys may be damaged by prolonged or repeated inhalation of the vapor.

Recent animal studies conducted by the National Cancer Institute (NCI) have shown that ethylene dichloride can cause cancer in rats and mice by oral administration. However, in other studies of rats and mice exposed to EDC by inhalation, the results—although preliminary—did *not* confirm the NCI findings.

The National Institute for Occupational Safety and Health (NIOSH) has recommended that the current OSHA permissible exposure limit be reduced from 50 ppm to 5 ppm (8-hour TWA) with a ceiling of 15 ppm. Although no evidence now exists showing that ethylene dichloride can cause cancer in human beings, PPG strongly suggests that EDC users review their health programs and operations and institute operating and housekeeping practices designed to limit employee exposure as much below currently established exposure limits as practical.

HANDLING AND STORAGE

Ethylene dichloride is a flammable liquid. It introduces a fire hazard wherever it is handled, stored or used. At high temperatures, such as occur in open flames, it decomposes to give off toxic and corrosive gases. Mixed with air

at ordinary temperatures, ethylene dichloride is explosive within the limits of 6.2 to 15.9% by volume. Fire and explosion hazards can be minimized by adequate ventilation, the proper types and arrangement of equipment, and reasonable precautions and care in handling.

Information on the "Safe Handling and Use of Ethylene Dichloride" appears in Chemical Safety Data Sheet SD-18 published by the Manufacturing Chemists Association, 1825 Connecticut Avenue, N.W., Washington, D.C. 20009. The MCA also publishes Manual Sheet TC-4 on "Unloading Flammable Liquids from Tank Cars."

PACKAGING AND SHIPPING

PPG Industries delivers ethylene dichloride by tank car, barge, tank truck, drums and ship from the Lake Charles, Louisiana, plant. Tank car and tank truck shipments can also be made from a terminal in Chicago, Illinois.

Tank car capacities include 8,000, 10,000 and 20,000 gallons. Tank truck capacity is generally 4,000 gallons.

SAMPLES AND SERVICE

Samples of ethylene dichloride are available in various sizes to meet customer requirements.

The technical service staff of PPG Industries' Chemicals Group is available for consulting on handling, storage and use.



PPG INDUSTRIES, Inc.
Chemicals Group
One Gateway Center
Pittsburgh, PA 15222

Statements and methods presented are based upon the best available information and practices known to PPG Industries at present, but are not representations or warranties of performance, result or comprehensiveness, nor do they imply any recommendations to infringe any patent or an offer of license under any patent.

The products mentioned here can be hazardous if not used properly. Any health hazard and safety information contained herein should be passed on to your customers or employees, as the case may be. PPG Industries also recommends that, before use, anyone using or handling this product thoroughly read and understand the information and precautions on the label, as well as in other product safety publications such as the Material Safety Data Sheet.

Like all potentially hazardous materials, this product must be kept out of the reach of children.



MERICHEM COMPANY

PHONE. A/C 713-224-3030 • 4800 TEXAS COMMERCE TOWER
TELEX 775-178 • HOUSTON, TEXAS 77002-3068

PURCHASING

AUG 25 1986

RECEIVED

99% meta CRESOL

SPECIFICATIONS

Specific Gravity @ 15.5°C./15.5°C.	1.039 ± .004
Moisture, wt. %, Max.	0.10%
Neutral Oil, wt./vol. %, Max.	0.10%
Total Sulfur, wt. %, Max.	0.01%
Pyridine Bases, wt. %, Max.	0.05%
Pentanol, wt. %, Max.	0.10%
Color, Max.	Gardner 2

Composition:

meta Cresol, wt. %, Min.	99.0%
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TYPICAL COMPOSITION BY VAPOR CHROMATOGRAPHY

Phenol	Trace
ortho Cresol, wt. %	0.1%
2,6 Xylenol, wt. %	Trace
meta Cresol	99.2%
para Cresol	0.4%
Xylenol + Ethyl Phenol, wt. % ..	0.3%



NITRIC ACID - CONCENTRATED
PRODUCT SPECIFICATIONS
(Product Code 7000200)

General Description: A light yellow to reddish brown fuming liquid.

<u>CHARACTERISTICS</u>	<u>LIMITS</u>	<u>TYPICAL VALUES</u>
Assay (as HNO_3)	98.0 min.	98.5%
Sulfate (as H_2SO_4)	0.07% max.	0.06%
Chlorides (as HCl)	5 ppm max.	2 ppm
Oxides of Nitrogen* (as N_2O_3)	0.15% max.	0.10%
Lead Salts	0.1% max.	0.05%
Ash	0.1% max.	0.01%
Nitrobodyes	None	None
Iron (as Fe)	15 ppm max.	9 ppm

*Product meets the 0.15% N_2O_3 specification at the time of shipping.

Due to normal buildup, it is likely to be much higher upon delivery during hot weather.

Rec'd 9/7/83

Table of Typical Analyses and Properties Sulfuric Acid

	60°	66°	95%	98-99%	20% Oleum	23% Oleum	30% Oleum	40% Oleum	65% Oleum
Plant	2, 4	1,2,3,4,	1, 2	1,2,3,4,	2	1, 2	1, 2	2	2
H ₂ SO ₄ , %	77.67	93.2	95.0	99.0	104.5	105.18	106.8	109.0	114.7
Sp. Gr. @ 60°F.	1.71	1.83	1.84	1.84	1.92	1.93	1.95	1.98	1.99
Weight, lbs./Gal.	14.2	15.3	15.3	15.4	15.98	16.0	16.28	16.53	16.61
Freeze Point, °F.	-12	-27	-10	+42	-23	-50	+66	+91	-36
Iron (As Shipped), PPM	100	40	40	40	40	40	40	.	25
SiO ₂ , PPM	5	4	4	4	.	.	.	.	.
Chlorides, PPM	1	<1	<1	<1	<1	<1	<1	<1	.
Non Volatile Metals, PPM	150	65	65	65	80	80	80	.	50
N ₂ O ₅ , PPM	2	2	2	2	2	2	2	.	.
Lead, PPM	<1	<1	<1	<1	<1	<1	<1	<1	<1
Color, APHA*	40	40	40	40	.	.	.	.	.

*Determined on a 1:1 dilution

-Indicates Not Determined

The above are typical analyses of Sulfuric Acid/Oleum manufactured by Cities Service Company. Plant designations are 1-Augusta, Georgia; 2-Copperhill, Tennessee; 3-Lake Charles, Louisiana; and 4-Monmouth Junction, New Jersey.

Other grades, and shipping points, are often available on special request. For additional information contact the Atlanta Sales Office.



TENNESSEE CHEMICAL COMPANY

3475 LENOX ROAD, N.E., SUITE 670 — ATLANTA, GEORGIA 30326

(404) 233-6811

RECEIVED

SEP 07 1983

Typical



P.O. Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone: (201) 297-0100 - Telex: 844482, 844527

February 28, 1984

Mr. Ron Cheves
Vice President of Business Development
VERTAC CHEMICAL CORPORATION
Suite 201
One Greentree Centre
Marlton, NJ 08053

RE: Secrecy Agreement between
Vertac Chemical Corporation
and Rhone-Poulenc Inc.

Dear Mr. Cheves:

To assist Vertac Chemical Corporation (hereinafter referred to as "Vertac") in its evaluation of the costs involved in nitrating the compound MC10879 to a product named "A" followed by caustic neutralization, Rhone-Poulenc Inc. is prepared to forward to Vertac certain proprietary information. The term "proprietary information" specifically includes the following technical information related to the aforementioned process: a simplified process flow diagram, operating conditions (pressure, temperature, reactants), waste streams and usage factors, and also includes data, knowhow, formulae, studies, processes, designs, specifications, samples, reports, findings, ideas, sketches, photographs and plans.

In order that we may have a clear understanding of the rights and obligations of our respective companies in connection with any and all proprietary information submitted by us to Vertac, we agree to forward you such proprietary information on the following terms and conditions:

1. Vertac agrees to keep confidential and not to disclose to others any and all information obtained from us at any and all times, and to use said information only for the purposes stated above. It further agrees that said disclosures and access to all such information shall be limited to those employees of Vertac who have need to know and who have been informed of and agree to be bound by the obligations of this paragraph. The obligations hereunder shall not apply to:
 - (a) information which at the time of disclosure is in the public domain;
 - (b) information which, after disclosure, becomes part of the public domain by publication or otherwise through parties other than the parties hereto except by breach of this Agreement by Vertac;



EXHIBIT E

ADEQ0017705

VERTAC CHEMICAL CORPORATION

2

February 28, 1984

- (c) information which Vertac can document by competent proof was in its possession at the time of disclosure and was not acquired, directly or indirectly, from Rhone-Poulenc Inc.;
- (d) information which Vertac receives from third parties; provided, however, that such information was not obtained by said third party, directly or indirectly, from Rhone-Poulenc Inc.
2. Vertac agrees to keep said information confidential for a period beginning with the date of this Agreement and terminating December 31, 1991.
3. No right, express or implied, is granted by this Agreement under any patent owned by Rhone-Poulenc Inc.
4. All disputes arising in connection with this Agreement shall be settled by the American Arbitration Association in accordance with its rules and procedures.
5. This Agreement shall bind and inure to the benefit of the successors and assigns of the entire business of the respective parties; and it will not be assigned by either party without the prior written consent of the other party.

We are sending this letter in duplicate. If the foregoing is satisfactory to you, please so indicate by signing and dating both copies in the spaces provided and return us the signed duplicate for our records.

Very truly yours,

RHONE-POULENC INC.


Vincent E. DeFelice
Senior Vice President
General Counsel

Accepted and Agreed to:
VERTAC CHEMICAL CORPORATION

By: Ron Chene

Title: Vice President

Date: 3.12.84

VED:das

cc: J-P. Dal Pont
T.M. Dille



EXHIBIT E

ADEQ0017705

cc J. Malone.

CHARLES W. METCALF 1940-1994
WILLIAM P. METCALF 1978-1990
JOHN W. APPERSON 1988-1995

CHARLES METCALF CRUMP
JERRE S. DUZANE
JOHN S. MAXWELL, JR.
ALLEN T. MALONE
PHILIP G. MAUNSBY
ROBERT L. DINKELSPIEL
MICHAEL E. HENEGLEY
JAMES F. RUSSELL
JOHN L. RYDER
COLBY S. MORGAN, JR.
MICHAEL S. CHAMPLIN
TONI L. CAMPBELL

SAMUEL RUBENSTEIN
GEORGE W. GRIDER
JOHN MART TODD
OF COUNSEL

LAW OFFICES
APPERSON, CRUMP, DUZANE & MAXWELL

26TH FLOOR
100 NORTH MAIN BUILDING
MEMPHIS, TENNESSEE 38103
901/525-1711

EAST OFFICE

SUITE 100
KIRBY CENTRE
1755 KIRBY PARKWAY
MEMPHIS, TENNESSEE 38119
901/755-6300

August 13, 1986

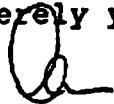
Mr. G. L. Pratt
Cedar Chemical Corporation
24th Floor, Clark Tower
5100 Poplar Avenue
Memphis, Tennessee 38137

Re: Cedar/Rhone-Poulenc Toll Manufacturing Agreement

Dear Geoff:

Enclosed for review by Ron and you is my first draft of the referenced agreement. As soon as I have your comments, I will make the necessary changes and submit the draft to Rhone-Poulenc's counsel for their review. Hopefully I will be able to do that by the end of this week.

Sincerely yours,



Allen T. Malone

ATM:jw

Enclosures

ADEQ0017622

FIRST DRAFT
08/13/86

AGREEMENT

THIS AGREEMENT made as of the first day of August, 1986 by and between CEDAR CHEMICAL CORPORATION, a Delaware corporation with offices at Suite 2414, Clark Tower, 5100 Poplar Avenue, Memphis, Tennessee 38137 ("Cedar"), and RHONE-POULENC, INC., a Delaware corporation with offices at Black Horse Lane, Monmouth Junction, New Jersey 08852 ("Rhone-Poulenc").

W I T N E S S E T H:

WHEREAS, Rhone-Poulenc has developed and currently possesses processes involving a coupling reaction for the manufacture of a product known as RP-15, and involving Nitration/Neutralization Steps for the production of a product known as RP-10 (RP-15 and RP-10 being sometimes referred to herein as "Products"); and

WHEREAS, Cedar owns production facilities at West Helena, Arkansas, which, when modified in accordance with the provisions of this Agreement, are deemed by the parties to be capable of manufacturing RP-15 and RP-10 in accordance with the provisions hereof; and

WHEREAS, Rhone-Poulenc desires to retain Cedar to manufacture RP-15 and RP-10, and Cedar desires to perform said services, all in accordance with the terms and conditions of this Agreement;

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, the parties agree as follows:

1. Definitions

For purposes of this Agreement, the following terms shall have the following meanings assigned thereto:

1.1. "RP-15" shall mean product meeting those specifications attached hereto as Exhibit "A";

1.2. "RP-10" shall mean product meeting those specifications attached hereto as Exhibit "B";

1.3. "Plant" shall mean those portions of Cedar's manufacturing facility at West Helena, Arkansas, including equipment to be installed thereat, as described described in Exhibits "C" and "D".

2. Term

This Agreement shall commence as of the date first written above and shall terminate on June 1, 1989, unless terminated earlier in accordance with the provisions hereof, or unless extended by mutual agreement of the parties hereto.

3. Plant Modifications and Equipment

3.1. Cedar has heretofore undertaken to modify the Plant in accordance with plans and specifications which have been approved by Rhone-Poulenc attached hereto as Exhibit "C", so as to enable Cedar to initiate production of RP-15 on or about October 1, 1986. Beginning August 31, 1986 and on the last day

of each month thereafter until completion of such modifications, Cedar shall invoice Rhone-Poulenc for all direct expenses incurred in so modifying the Plant, provided that the total of such invoices shall not exceed \$75,000, except to the extent of any excess expenditures approved in writing by Rhone-Poulenc. Title to all equipment and facilities acquired in connection with such modifications shall be and remain in Cedar. Cedar shall make its best efforts to complete the modifications described in Exhibit "C" by September 30, 1986.

3.2. Beginning on or about October 15, 1986, subject to successful startup of the production of RP-15 at the Plant contemplated hereunder, Cedar shall initiate additional modification of the Plant in accordance with the plans and specifications to be approved by Rhone-Poulenc and attached hereto as Exhibit "D" so as to enable Cedar to produce RP-10 beginning not later than February 15, 1987. Cedar shall submit monthly invoices to Rhone-Poulenc for reimbursement of costs incurred in connection with said modifications pursuant to this Section 3.2 beginning the 31st day of October, 1986 and monthly thereafter provided that the aggregate of said invoices shall in no event exceed the sum of \$425,000 except to the extent of any excess expenditures approved in writing by Rhone-Poulenc. Cedar shall retain title to all equipment and other facilities acquired by it in connection with such modifications with the exception of one glass-lined

reactor which Rhone-Poulenc shall furnish at its cost and expense, title to which shall be and remain in Rhone-Poulenc. Upon termination of this Agreement, such reactor shall be removed from the Plant and delivered to Rhone-Poulenc at its sole cost and expense.

3.3 All invoices submitted by Cedar to Rhone-Poulenc for plant modifications pursuant to this Article 3 shall be due and payable by Rhone-Poulenc within ten days from the date of such invoices. Cedar shall make available to Rhone-Poulenc upon request reasonably detailed documentation supporting the costs and other expenditures covered by such invoices.

4. Production Quantities and Schedules

4.1. Beginning on or about October 15, 1986, Cedar shall start up the facilities at the Plant modified in accordance with Exhibit "C", and shall make its best efforts to manufacture in a continuous 90-day campaign up to 684,000 pounds of RP-15, utilizing Rhone-Poulenc's process identified in Exhibit "E" attached hereto, and using raw materials meeting the specifications required in accordance with said process, such raw materials to be supplied by Rhone-Poulenc at its sole cost and expense in sufficient quantities for Cedar to carry out the initial RP-15 production campaign, as well as any subsequent production campaigns hereunder. Vertac's total processing charge for undertaking the initial RP-15 campaign hereunder shall be the sum of \$435,000,

which sum shall be invoiced by Cedar to Rhone-Poulenc in three equal monthly installments, the first to coincide with start-up of facilities at the Plant at the beginning of the initial RP-15 campaign, and the remaining two invoices to be issued at the end of each thirty days thereafter. The total processing charge so invoiced shall cover any amount of production of RP-15 during the initial ninety-day campaign up to 684,000 pounds. Additional production of RP-15 during the ninety-day campaign shall be invoiced to Rhone-Poulenc at the rate of thirty-five cents (\$.35) per pound. In the event the initial RP-15 campaign is extended beyond the original ninety-day period, additional production time will be charged to Rhone-Poulenc at the rate \$175,000 per month, prorated for any period shorter than one month.

4.2. Beginning on or about January 15, 1987, but, subject to the conditions specified in Section 3.2 of this Agreement, not later than February 15, 1987, Cedar shall start up the facilities at the Plant modified in accordance with Exhibit "D", and shall make its best efforts to manufacture in a continuous ninety-day campaign up to 600,000 pounds of RP-10, utilizing Rhone-Poulenc's process identified in Exhibit "F" attached hereto, and using raw materials meeting the specifications required in accordance with said process, such raw materials to be supplied by Rhone-Poulenc at its sole cost and expense in sufficient quantities for Cedar to carry out the initial RP-10 pro-

duction campaign, as well as any subsequent production campaigns hereunder. Cedar's total processing charge for undertaking the initial RP-10 campaign hereunder shall be the sum of \$550,000, which sum shall be invoiced by Cedar to Rhone-Poulenc in three equal monthly installments, the first to coincide with the start up of facilities at the Plant at the beginning of the initial RP-10 campaign, and the remaining two invoices to be issued at the end of each thirty days thereafter. The total processing charge so invoiced shall cover any amount of production of RP-10 during the initial ninety-day campaign up to 600,000 pounds. Additional production of RP-10 during the ninety-day campaign shall be invoiced to Rhone-Poulenc at the rate of thirty-five (\$.35) cents per pound. In the event the initial RP-10 campaign is extended beyond the original ninety-day period, additional production time will be charged to Rhone-Poulenc at the rate of \$200,000 per month, prorated for any period shorter than one month.

4.3. Rhone-Poulenc believes that the Plant, when modified in accordance with Exhibits "C" and "D" respectively, will be capable of producing RP-15 (100% contained active ingredient) at a rate of 10,000 pounds per day, and RP-10 (100% contained active ingredient) at a rate of 9,000 pounds per day. In the course of process confirmation start-up periods for each of the Products described herein. Specifically, during each such

process confirmation start-up period, each to occur during at least seven consecutive days following initial start up, it is understood that the Plant shall demonstrate the ability to produce Products at the rates, yields, and meeting the specifications referred to or contemplated herein, or otherwise acceptable to Rhone-Poulenc. In the absence of such demonstration, Cedar shall have the right to terminate this Agreement upon notice to Rhone-Poulenc. Any raw material consumption or product yield standards to be undertaken by Cedar hereunder shall be established by good faith negotiation of the parties based on production results during such start-up periods.

4.4. Cedar shall maintain the Plant, including the equipment and other facilities described in Exhibits "C" and "D", for future production campaigns during the initial term of this Agreement; provided, however, that unless Rhone-Poulenc shall issue future purchase orders to Cedar not later than June 1, 1987 and annually thereafter for production of at least the same quantities of RP-15 and RP-10 projected for the initial campaign hereunder, in each case beginning within 120 days following such purchase order, Cedar shall have the right to terminate this Agreement upon written notice to Rhone-Poulenc. Processing charges for such additional campaigns following June 1, 1987 shall be \$175,000 for each thirty days for RP-15 and \$200,000 for

each thirty days for RP-10, in each case escalated in accordance with the formula attached hereto as Exhibit "G".

5. Method of Operation

5.1. Throughout all production campaigns under this Agreement, Rhone-Poulenc shall furnish Cedar, or cause it to be furnished, with raw materials in amounts sufficient to enable Cedar to produce the quantities of RP-15 and RP-10 required hereunder in a timely fashion so as to permit production of said Products in continuous campaigns of not less than ninety days each, such raw materials to be furnished in bulk, FOB the Plant.

5.2. Cedar shall provide at the Plant receiving, storage and delivery facilities and services necessary to fully perform its obligations hereunder. Cedar shall take reasonable steps to preserve and protect raw materials and Products produced therefrom contamination, theft, damage or destruction while in Cedar's possession.

5.3. Cedar will inspect all raw materials tendered by Rhone-Poulenc hereunder, and promptly shall advise Rhone-Poulenc's designated representative of any apparent defects in such raw materials. Rhone-Poulenc shall provide to Cedar a weight ticket and certificate of analysis for all raw materials to be delivered by it hereunder.

5.4. Cedar shall ship Products in accordance with Rhone-Poulenc's instructions and at Rhone-Poulenc's sole cost and expense.

6. Title And Risk Of Loss

6.1. Title to raw materials delivered by Rhone-Poulenc to Cedar and title to Products produced by Cedar therefrom shall at all times remain solely in Rhone-Poulenc. Raw materials and Products shall be segregated from other materials and goods of Cedar.

6.2. Subject to the terms of this Agreement, Cedar shall assume the risk of loss of or damage to raw materials from the time of delivery to it hereunder, and for loss of or damage to work in process and to Products produced hereunder until delivery to Rhone-Poulenc's carrier at the Plant, except to the extent that such loss or damage results from Rhone-Poulenc's negligence. In no event shall Cedar be liable to Rhone-Poulenc for indirect or consequential damages alleged as a result of any such loss or damage.

7. Waste Disposal

7.1 Cedar's responsibility for handling waste generated as a result of its performance hereunder shall be (a) to neutralize said waste in such manner as will permit off-site disposal of same, and (b) to assist Rhone-Poulenc in the selection of a

contractor to handle off-site treatment or disposal of such waste. The cost of all such off-site treatment or disposal of waste hereunder shall be borne directly by Rhone-Poulenc, and Rhone-Poulenc shall indemnify Cedar and save it harmless from and against all costs or damages, including reasonable attorneys' fees incurred by it which shall arise out of transportation, storage or treatment of such waste in any manner approved by Rhone-Poulenc hereunder.

7.2 Cedar shall make its best efforts to develop on-site disposal methods and processes to be carried out at the Plant. In the event Cedar is successful in developing any such on-site waste disposal process, it shall also be responsible for obtaining and maintaining all required Federal and State Permits, and the parties shall negotiate in good faith to establish a reasonable waste disposal fee for such on-site treatment and disposal of waste generated hereunder.

8. Access To Plant/Assistance

8.1. Cedar shall keep Rhone-Poulenc fully and currently informed with respect to its modification and production activities hereunder and shall afford reasonable access to Rhone-Poulenc personnel to observe such operations. Rhone-Poulenc shall hold Cedar harmless from and indemnify it against all claims and liability on account of personal injuries suffered by Rhone-Poulenc personnel while at the Plant.

8.2 During the course of Plant modifications and start-up periods referred to herein, Rhone-Roulenc shall provide Cedar with on-site personnel capable of assisting Cedar in said activities, and shall provide such other services as Cedar shall reasonably request in order to accomplish the goals of this Agreement.

9. Warranties

9.1. Cedar warrants that all Products produced by it hereunder following the process confirmation start-up periods for RP-15 and RP-10, respectively, shall conform to the specifications attached hereto as Exhibits "A" and "B" respectively, as same shall be revised either during the process confirmation start-up periods or thereafter by consent of the parties hereto. Cedar makes no other warranty with respect to the Products to be manufactured hereunder, whether of merchantability or fitness for a particular purpose, and none shall be implied.

9.2. Cedar warrants that all raw materials furnished by it hereunder shall conform to the specifications included in Exhibits "E" and "F" hereunder.

10. Indemnification

10.1. Cedar agrees to hold Rhone-Poulenc harmless from and to indemnify against all loss, costs, damages, liability and expense, including reasonable attorney's fees, on account of any personal injury or property damage arising out of Cedar's manufacture, handling and storage of raw materials and Products

hereunder during periods when such materials are in Cedar's possession and control, except to the extent that such occurrences are caused by the negligence of Rhone-Poulenc.

10.2. Rhone-Poulenc agrees to hold Cedar harmless from and to indemnify it against all loss, costs, damages, liability and expense, including reasonable attorney's fees on account of all personal injury or property damage arising out of occurrences relating to the handling, storage, transportation, sale or use of raw materials delivered to Cedar hereunder and RP-15 and RP-10 produced by Cedar hereunder when such materials are not in Cedar's possession and control, except to the extent that such occurrences are caused by the negligence of Cedar.

11. Force Majeure

11.1. No liability shall result from non-performance or delay in performance caused by circumstances beyond the reasonable control of the affected party; provided, however, that any party whose performance is prevented or impeded by such circumstances shall promptly provide written notice with reasonable particulars to the other party.

12. Notices

12.1. All notices required hereunder shall be deemed to be properly served as sent by first class mail, postage prepaid thereon or by telegram or overnight mail, and addressed to the party for whom intended at the following addresses:

If to Cedar:

If to Rhone-Poulenc:

13. Default

13.1. Anything elsewhere in this Agreement to the contrary notwithstanding, if either party breaches any of its obligations hereunder, becomes insolvent or commits an act of bankruptcy, or if a receiver is appointed for either party, then in any such event the other party may terminate this Agreement effective fifteen (15) days following written notice of termination by reason of such default, provided such default shall not have been cured by the effective date of such notice.

14. Independent Contractor

14.1. Cedar's performance hereunder is not deemed to create an agency between the parties hereunder, it being

understood that Cedar is acting solely as an independent contractor, and is solely responsible for the employment, control and conduct of its employees.

15. Secrecy Agreement

15.1. The Secrecy Agreement dated _____ between Cedar and Rhone-Poulenc attached hereto as Exhibit "H" is incorporated herein by reference.

16. General

16.1. The parties further agree as follows: (a) This Agreement shall be governed by the laws of the State of Arkansas; (b) No modification of this Agreement or waiver of any of its provisions shall be effective unless in writing and signed by the party to be bound thereby. Neither party's waiver of any breach of any of the provisions of this Agreement shall be deemed to be a waiver of any subsequent breach of the same nature or of any breach of a different nature; (c) This Agreement shall bind the successors and assigns of the parties hereto, but neither party may assign its rights or interests in this Agreement without the prior written consent of the other party, which consent shall not be unreasonably withheld; provided that Cedar may assign its rights in this Agreement to any purchaser of the Plant and Rhone-Poulenc may assign its rights in this Agreement to a purchaser of substantially all of its pesticide business. The section headings in this Agreement are inserted for con-

venience only and are not to be construed as part of the Agreement nor as a limitation on the scope of the particular sections to which they refer.

IN WITNESS WHEREOF, Cedar and Rhone-Poulenc have executed this Agreement as of the date and year first above appearing.

CEDAR CHEMICAL CORPORATION

By: _____

Title: _____

Date: _____

RHONE-POULENC, INC.

By: _____

Title: _____

Date: _____

CONTRACT

RHÔNE-POULENC INC.

P O Box 125 - Black Horse Lane - Monmouth Junction New Jersey 08852 Telephone (201) 297-0100 - Telex 844527

September 5, 1986

34 MONTHS
TOTAL

Mr. Ron Cheves
Vice President
Cedar Chemical Corporation
5100 Poplar Avenue
24th Floor
Memphis, Tennessee 38137

Dear Mr. Cheves:

The terms and conditions of this Letter Agreement in conjunction with the terms and conditions of the August 1, 1986 Letter Agreement, incorporated herein by reference and attached hereto as Exhibit "A", shall constitute the Agreement between Cedar Chemical Corporation, a Delaware corporation, with offices at Suite 2414, Clark Tower, 5100 Poplar Avenue, Memphis, Tennessee 38137, (hereinafter "Cedar") and Rhone-Poulenc Inc., a New York corporation, with offices at Black Horse Lane, Monmouth Junction, New Jersey (hereinafter "Rhone-Poulenc") concerning certain steps in the production of Tackle® intermediates which include production of two intermediates--1) by a coupling reaction and 2) the other by nitration and neutralization steps.

Definitions

For purposes of this Agreement, the following terms shall have the following meanings assigned thereto:

"RP-15" shall mean product meeting those specifications attached hereto as Exhibit "B".

"RP-10" shall mean product meeting those specifications attached hereto as Exhibit "C".

Term

This Agreement shall commence as of August 1, 1986 and shall terminate on June 1, 1989, unless terminated earlier in accordance with the provisions hereof, or unless extended by mutual agreement of the parties hereto.

Plant Modifications and Equipment

Cedar has heretofore undertaken to modify the plant in accordance with plans and specifications which have been approved by Rhone-Poulenc, so as to enable Cedar to initiate production of RP-15 on September 15, 1986.



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Beginning August 31, 1986 and on the last day of each month thereafter until completion of such modifications, Cedar shall invoice Rhone-Poulenc for all expenses incurred in so modifying the Plant, provided that the total of such invoices shall not exceed \$75,000. Title to all equipment and facilities acquired in connection with such modifications shall be and remain in Cedar. Cedar shall complete the modifications by September 15, 1986.

Beginning on August 31, 1986, Cedar shall initiate additional modification of the Plant in accordance with the plans and specifications to be approved by Rhone-Poulenc so as to enable Cedar to produce RP-10 as early as January 15, 1987 but no later than February 15, 1987. Cedar shall submit monthly invoices to Rhone-Poulenc for reimbursement of costs incurred in connection with said modifications beginning the 30th day of September, 1986 and monthly thereafter provided that the aggregate of said invoices shall in no event exceed the sum of \$425,000, except to the extent of any excess expenditures approved in writing by Rhone-Poulenc with respect to any changes in the scope of the work. Cedar shall retain title to all equipment and other facilities acquired by it in connection with such modifications, except for a glass-lined reactor which shall belong to Rhone-Poulenc Inc.

All invoices submitted by Cedar to Rhone-Poulenc for plant modifications shall be due and payable by Rhone-Poulenc within ten days from the date of such invoices. Cedar shall make available to Rhone-Poulenc upon request reasonably detailed documentation supporting the costs and other expenditures covered by such invoices, including any labor costs.

Method of Operation

Throughout all production campaigns under this Agreement, Rhone-Poulenc shall furnish Cedar, or cause it to be furnished, with raw materials in amounts sufficient to enable Cedar to produce the quantities of RP-15 and RP-10 required hereunder in a timely fashion so as to permit production of said Products in continuous campaigns of ninety days each, such raw materials to be furnished in bulk, FOB the Plant.

Cedar shall provide at the Plant receiving, storage and delivery facilities and services necessary to fully perform its obligations hereunder. Cedar shall take reasonable steps to preserve and protect raw materials and Products produced therefrom contamination, theft, damage or destruction while in Cedar's possession.

Cedar will inspect all raw materials tendered by Rhone-Poulenc hereunder, and promptly shall advise Rhone-Poulenc's designated representative of any apparent defects in such raw materials. Rhone-Poulenc shall provide to Cedar a weight ticket and certificate of analysis for all raw materials to be delivered by it hereunder.

Cedar shall ship Products in accordance with Rhone-Poulenc's instructions and at Rhone-Poulenc's sole cost and expense.

Title And Risk Of Loss

Title to raw materials delivered by Rhone-Poulenc to Cedar and title to Products produced by Cedar therefrom shall at all times remain solely in Rhone-Poulenc. Raw materials and Products shall be segregated from other materials and goods of Cedar.

Subject to the terms of this Agreement, Cedar shall assume the risk of loss of or damage to raw materials from the time of delivery to it hereunder, and for loss of or damage to work in process and to Products produced hereunder until delivery to Rhone-Poulenc's carrier at the Plant, except to the extent that such loss or damage results from Rhone-Poulenc's negligence. In no event shall Cedar be liable to Rhone-Poulenc for indirect or consequential damages alleged as a result of any such loss or damage.

Waste Disposal

Cedar's responsibility for handling waste generated as a result of its performance hereunder shall be (a) to neutralize said waste in such manner as will permit off-site disposal of same, and (b) to assist Rhone-Poulenc in the selection of a contractor to handle off-site treatment or disposal of such waste. The cost of all such off-site treatment or disposal of waste hereunder shall be borne directly by Rhone-Poulenc. Rhone-Poulenc shall indemnify Cedar and save it harmless from and against all costs or damages, including reasonable attorneys' fees incurred by it which shall arise out of transportation, storage or treatment of such waste in any manner approved by Rhone-Poulenc hereunder. However, such indemnification shall not apply to any costs or damages, including reasonable attorneys' fees incurred by Cedar which arise as a result of its negligence or its violation of any statute, ordinance or regulation.

Cedar shall make its best efforts to develop on-site disposal methods and processes to be carried out at the

Plant. In the event Cedar is successful in developing any such on-site waste disposal process, it shall also be responsible for obtaining and maintaining all required Federal and State Permits, and the parties shall negotiate in good faith to establish a reasonable waste disposal fee for such on-site treatment and disposal of waste generated hereunder.

Access To Plant/Assistance

Cedar shall keep Rhone-Poulenc fully and currently informed with respect to its modification and production activities hereunder and shall afford reasonable access to Rhone-Poulenc personnel to observe such operations. Rhone-Poulenc shall hold Cedar harmless from and indemnify it against all claims and liability on account of personal injuries suffered by Rhone-Poulenc personnel while at the Plant.

During the course of Plant modifications and start-up periods referred to herein, Rhone-Poulenc shall provide Cedar with on-site personnel capable of assisting Cedar in said activities, and shall provide such other services as Cedar shall reasonably request in order to accomplish the goals of this Agreement.

Warranties

Cedar warrants that all Products produced by it hereunder following the process confirmation start-up periods for RP-15 and RP-10, respectively, shall conform to the specifications attached hereto as Exhibits "B" and "C" respectively, as same shall be revised either during the process confirmation start-up periods or thereafter by consent of the parties hereto. Cedar makes no other warranty with respect to the Products to be manufactured hereunder, whether of merchantability or fitness for a particular purpose, and none shall be implied.

Cedar warrants that all raw materials furnished by it hereunder shall conform to the specifications included in Exhibits "D" hereunder.

Indemnification

Cedar agrees to hold Rhone-Poulenc harmless from and to indemnify against all loss, costs, damages, liability and expense, including reasonable attorney's fees, on account of any personal injury or property damage arising out of Cedar's manufacture, handling and storage of raw materials and Products hereunder during period when such materials are in Cedar's possession

and control, except to the extent that such occurrences are caused by the negligence of Rhone-Poulenc.

Rhone-Poulenc agrees to hold Cedar harmless from and to indemnify it against all loss, costs, damages, liability and expense, including reasonable attorney's fees on account of all personal injury or property damage arising out of occurrences relating to the handling, storage, transportation, sale or use of raw materials delivered to Cedar hereunder and RP-15 and RP-10 produced by Cedar hereunder when such materials are not in Cedar's possession and control, except to the extent that such occurrences are caused by the negligence of Cedar.

Payment of Processing Charges For RP-15 and RP-10

Cedar's total processing charge for undertaking the initial RP-15 campaign hereunder shall be the sum of \$435,000 which sum shall be invoiced by Cedar to Rhone-Poulenc in three equal monthly installments, the first to coincide with start-up of facilities at the Plant at the beginning of the initial RP-15 campaign, and the remaining two invoices to be issued at the end of each thirty days thereafter. The total processing charge so invoiced shall cover any amount of production of RP-15 during the initial ninety-day campaign up to 684,000 pounds. Additional production of RP-15 during the ninety-day campaign shall be invoiced to Rhone-Poulenc at the rate of thirty-five cents (\$.35) per pound. In the event the initial RP-15 campaign is extended beyond the original ninety-day period, additional production time will be charged to Rhone-Poulenc at the rate of \$175,000 per month, prorated for any period shorter than one month.

Cedar's total processing charge for undertaking the initial RP-10 campaign hereunder shall be the sum of \$550,000, which sum shall be invoiced by Cedar to Rhone-Poulenc in three equal monthly installments, the first to coincide with the start up of facilities at the Plant at the beginning of the initial RP-10 campaign, and the remaining two invoices to be issued at the end of each thirty days thereafter. The total processing charge so invoiced shall cover any amount of production of RP-10 during the initial ninety-day campaign up to 600,000 pounds. Additional production of RP-10 during the ninety-day campaign shall be invoiced to Rhone-Poulenc at the rate of thirty-five (\$.35) cents per pound. In the event the initial RP-10 campaign is extended beyond the original ninety-day period, additional production time will be charged to Rhone-Poulenc at the rate of \$200,000 per month, prorated for any period shorter than one month.

Cedar's Acknowledgement

Cedar acknowledges that it has received process information safety studies, Material Safety Data Sheets of all raw materials and waste streams and products from Rhone-Poulenc; and Cedar also acknowledges that it is a chemical manufacturer, knowledgeable in the safe handling of chemicals and qualified to perform the required manufacturing functions hereunder.

Usage Factors

During each process confirmation start-up period (each period to be for a maximum of seven consecutive days following initial start-up), it is understood that Cedar and Rhone-Poulenc shall agree upon usage factors for raw materials and waste by products.

Invention

Should any invention arise from an improved manufacturing process of RP-15 or RP-10 as a result of Rhone-Poulenc's or Cedar's efforts, such invention and any patent rights thereto should belong exclusively to Rhone-Poulenc Inc.

Failure To Issue Additional Purchase Orders

Cedar shall maintain the Plant, for future production campaigns during the initial term of this Agreement; provided, however, that Rhone-Poulenc shall issue future purchase orders to Cedar not later than June 1, 1987 and by June 1 of each successive calendar year during the term hereof for production of either RP-15 or RP-10, or both. In each case such campaigns shall be completed by May 31 of such contract year. If Rhone-Poulenc fails to issue such additional purchase orders, Cedar shall have the right to terminate this Agreement upon written notice to Rhone-Poulenc. Processing charges for such additional campaigns following June 1, 1987 shall be substantially identical to those applicable to the initial campaigns.

Force Majeure

No liability shall result from non-performance or delay in performance caused by circumstances beyond the reasonable control of the affected party; provided, however, that any party whose performance is prevented or impeded by such circumstances shall promptly provide written notice with reasonable particulars to the other party.

Notices

All notices required hereunder shall be deemed to be properly served as sent by first class mail, postage prepaid thereon or by telegram or overnight mail, and addressed to the party for whom intended at the following addresses:

If to Cedar:

Mr. G.L. Pratt
Cedar Chemical Corporation
24th Floor, Clark Tower
5100 Poplar Avenue
Memphis, Tennessee 38137

If to Rhone-Poulenc:

Mr. Jean-Pierre Dal Pont
Vice President of Technical Services
Rhone-Poulenc, Inc.
P.O. Box 125
Black Horse Lane
Monmouth Junction, New Jersey 08852

Default

Anything elsewhere in this Agreement to the contrary notwithstanding, if either party breaches any of its obligations hereunder, becomes insolvent or commits an act of bankruptcy, or if a receiver is appointed for either party, then in any such event the other party may terminate this Agreement effective fifteen (15) days following written notice of termination by reason of such default, provided such default shall not have been cured by the effective date of such notice.

Independent Contractor

Cedar's performance hereunder is not deemed to create an agency between the parties hereunder, it being understood that Cedar is acting solely as an independent contractor, and is solely responsible for the employment, control and conduct of its employees.

Secrecy Agreement

The Secrecy Agreement dated March 12, 1984 between Cedar and Rhone-Poulenc attached hereto as Exhibit "E" is incorporated herein by reference.

General Provisions

The parties further agree as follows: (a) This Agreement shall be governed by the laws of the State of Arkansas; (b) No modification of this Agreement or waiver of any of its provisions shall be effective unless in writing and signed by the party to be bound thereby. Neither party's waiver of any breach of any of the provisions of this Agreement shall be deemed to be a waiver of any subsequent breach of the same nature or of any breach of a different nature; (c) This Agreement shall bind the successors and assigns of the parties hereto, but neither party may assign its rights or interests in this Agreement without the prior written consent of the other party, which consent shall not be unreasonably withheld; provided that Cedar may assign its rights in this Agreement to any purchaser of the Plant and Rhone-Poulenc may assign its rights in this Agreement to a purchaser of substantially all of its pesticide business; (d) If the terms of any purchase orders or invoices are contrary to the terms and conditions of this Agreement, the terms and conditions of such purchase orders or invoices are superseded by the terms and conditions of this Agreement. The section headings in this Agreement are inserted for convenience only and are not to be construed as part of the Agreement nor as a limitation on the scope of the particular sections to which they refer.

Please indicate your agreement with these terms and conditions by signing and dating the original and two (2) copies of this Letter Agreement returning the original and a copy to me.

ACCEPTED AND AGREED TO:

CEDAR CHEMICAL CORPORATION

By: Ron Cheves

Ron Cheves
Vice President

Very truly yours,

RHONE-POULENC INC.

By: Jean Pierre Del Pont

Jean-Pierre Del Pont
Vice President of
Technical Services

Date: 9.5.86

Tackle® is a registered trademark of Rhone-Poulenc Inc.

RHÔNE-POULENC INC.

P.O. Box 125 - Black Horse Lane - Monmouth Junction - New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

August 1, 1986

Mr. Ron Cheves
Vice President
Cedar Chemical Corporation
5100 Poplar
24th Floor
Memphis, Tennessee 38137

Dear Mr. Cheves:

Rhone-Poulenc Inc. proposes to enter into a contract with Cedar Chemical Corporation (hereinafter "Cedar") concerning certain steps in the production of Tackle[®], intermediates, which include production of two intermediates: 1) by a coupling reaction and 2) the other by nitration and neutralization steps. This Letter Agreement sets forth the following key terms and conditions agreed upon by the parties:

Coupling Reaction - RP-15

Cedar will modify an existing production facility for a maximum charge of \$75,000 to produce a minimum of 684,000 pounds of RP-15 at a nominal rate of 10,000 pounds per day (100% basis). The maximum charge of \$75,000 will be invoiced monthly and payment shall be made within 10 days of the date of the invoice. The amount of such invoices shall be equal to the expenditures actually incurred by Cedar for modification and installation charges related to Cedar's existing equipment. In order to verify Cedar's expenditures, Cedar shall make said invoices available to Rhone-Poulenc Inc. upon request.

The production rate will be guaranteed by Cedar, following a 7 day process confirmation start-up period, to be attended by Rhone-Poulenc personnel.

Production of 684,000 pounds is projected to be complete in 76 days. Additional production beyond 684,000 pounds, if desired, will be continued for 14 days and will be charged at the rate of \$.35 per pound of RP-15 (100% basis).

Production will commence on October 1, 1986, following a 6 week period required for plant preparation.

EXHIBIT A



ADEQ0017536

Total processing charges for 90 days of production will be \$435,000, to be paid in three equal payments during the 90 day campaign. Additional production during the 90 day period will be charged at the rate of \$.35 per pound. Production time requested, beyond the 90 day period, will be charged for at the rate of \$175,000 per month - pro rata per day.

Nitration - Neutralization - RP-10

Cedar will modify an existing production facility for a maximum charge of \$425,000 to produce a minimum of 600,000 pounds of RP-10 at a nominal rate of 9,000 pounds per day (100% active basis). The maximum charge of \$425,000 will be invoiced monthly and payment shall be made within 10 days of the date of the invoice. The amount of such invoices shall be equal to the expenditures actually incurred by Cedar for the purchase of equipment. Such equipment shall belong to Cedar except for a glass-lined reactor which shall belong to Rhone-Poulenc Inc. In order to verify Cedar's expenditures, Cedar shall make said invoices available to Rhone-Poulenc Inc. upon request.

The production rate will be guaranteed by Cedar following a 7 day process confirmation start-up period, to be attended by Rhone-Poulenc personnel.

Production of 600,000 pounds is projected to be complete in 73 days. Additional production beyond 600,000 pounds, if desired, will be continued for 17 days and will be charged at the rate of \$.35 per pound.

Production will commence as early as January 15, 1987 but no later than February 15, 1987, following a 10-12 week period required for plant preparation. Rhone-Poulenc Inc. shall provide Cedar with 30 days advance written notice of the actual commencement of production.

Total processing charges for 90 days of production will be a minimum of \$550,000, to be paid in three equal payments during the campaign. Additional production, during the 90 day period, will be charged for at the rate of \$.35 per pound of RP-10 (100% basis). Production time requested beyond the 90 day period will be charged for at the rate of \$200,000 per month - pro rata per day.

General Provisions

Cedar will secure necessary permits required to begin and continue production. Rhone-Poulenc Inc shall provide any necessary information or assistance in the procurement of said permits; and the status of said permits will be reviewed every 30 days by Cedar's and Rhone-Poulenc Inc.'s appropriate personnel. Cedar shall also advise Rhone-Poulenc Inc. in writing as to the need of any permit. If a 30 or more day delay occurs in processing any permit or if Cedar fails to procure a necessary permit, Rhone-Poulenc Inc. shall have the right to terminate this Agreement upon written notice to Cedar. However, Rhone-Poulenc Inc shall forfeit any monies paid prior to the date of termination.

Wastes will be processed by Cedar, if necessary, and sent off site for disposal with Rhone-Poulenc being charged the actual commercial rate. The costs of such waste processing is included in the over-all processing charge. Cedar shall provide Rhone-Poulenc Inc. with a detailed statement concerning its methods of waste disposal and shall verify that such methods comply with existing Federal and State environmental laws. Prior to the disposition of any wastes, the parties shall mutually agree upon the waste disposal site. In the event Cedar can process wastes through the biological system at West Helena, Cedar will share the savings with Rhone-Poulenc Inc.

Production facilities prepared for this project will be maintained by Cedar and will be made available to Rhone-Poulenc for additional production campaigns during a three year period. Prices will be approximately the same as provided in the first campaign with appropriate escalators to be provided in a subsequent Contract between the parties. Cedar will require advance notice of intent by June 1, 1987 to produce and volumes required. At the time of notification, Rhone-Poulenc Inc. shall advise Cedar whether to proceed only with the coupling step or also with the nitration and neutralization steps.

Cedar will be responsible for raw material consumption following the start-up process confirmation period. However, Cedar shall pay for the loss of any raw materials as a result of its negligence or the failure of equipment. In the event material is not in accordance with specifications, Cedar shall make a good faith effort to reprocess the material in order to comply with specifications.

Rhone-Poulenc will provide containers for shipment of product FOB West Helena, Arkansas.

EXHIBIT A

Rhone-Poulenc will provide all raw materials and bear the cost of all waste disposal.

Notwithstanding this Letter Agreement, it is also understood that all of the terms and conditions contained herein will be incorporated into a formal Contract which will be executed no later than August 29, 1986. The Contract will also make provision for additional terms and conditions covering such items as: indemnities, warranties, insurance etc.

Please indicate your agreement with these terms and conditions by signing and dating the original and two copies of this Letter Agreement returning the original and a copy to me.

Very truly yours,

RHONE-POULENC INC.

BY: Jean Pierre Dal Pont
Jean-Pierre Dal Pont
Vice President of
Technical Services

ACCEPTED AND AGREED TO:

CEDAR CHEMICAL CORPORATION

BY: Ron Cheves
Ron Cheves
Vice President

DATE: 8.1.86

Tackle^(a) is a registered trademark of Rhone-Poulenc Inc.

EXHIBIT A

orig to Neil

RHÔNE-POULENC INC.

P O Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

May 18, 1987

Cedar Chemical
Highway 242 South
West Helena, Arkansas 72390

Gentlemen:

At the end of May, we have scheduled a physical inventory of all products stored at all outside locations.

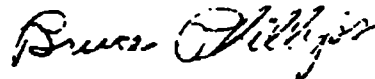
Therefore, we respectfully request that you complete the form enclosed showing all Rhone-Poulenc owned material in your possession as of the close of business May 31, 1987. If you discover any damaged inventory please make a note of it on the form.

Several of our outside storage facilities will be selected for an internal audit. If your location is selected, the person conducting the audit will contact you.

Please direct your response and any questions to Mr. Robert Dunn (201-821-2091) or Mr. George Ruskai (201-821-2092) at the address above. A self-addressed, stamped envelope is enclosed for your convenience.

Your prompt and full cooperation will be greatly appreciated.

Very truly yours,



Bruce A. Phillips
Corporate Controller

BAP/alw
Enclosure



ADEQ0017385

RHÔNE-POULENC INC.

P O Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

Charlie
Tom
Richard
Joe
Ken
Joel

May 18, 1987

OVERNIGHT EXPRESS MAIL


Mr. Ron Cheves
Vice President
CEDAR CHEMICAL CORPORATION
5100 Poplar Avenue
24th Floor
Memphis, Tennessee 38137

Dear Mr. Cheves:

Pursuant to our Letter Agreement, dated September 5, 1986, please be advised that Rhone-Poulenc shall not issue future purchase orders for the production of either RP-15 or RP-10.

Very truly yours,

RHONE-POULENC INC.

By: 
~~Jean-Pierre Bal Pont~~
Vice President
TECHNICAL SERVICES



ADEQ0017532

RHÔNE-POULENC INC.

P.O. Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

Charlie
Tom
Richard
Joe
Ken
Joel

May 18, 1987

OVERNIGHT EXPRESS MAIL

Mr. Ron Cheves
Vice President
CEDAR CHEMICAL CORPORATION
5100 Poplar Avenue
24th Floor
Memphis, Tennessee 38137


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Very truly yours,

RHONE-POULENC INC.

By:


~~Jean-Pierre Val Pont~~
Vice President
TECHNICAL SERVICES

RHÔNE-POULENC INC.

P O Box 125 - Black Horse Lane - Monmouth Junction New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

May 18, 1987

OVERNIGHT EXPRESS MAIL

Mr. Ron Cheves
Vice President
CEDAR CHEMICAL CORPORATION
5100 Poplar Avenue
24th Floor
Memphis, Tennessee 38137


Dear Mr. Cheves:

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Very truly yours,

RHONE-POULENC INC.

By:


~~Jean-Pierre Dal Pont~~
Vice President
TECHNICAL SERVICES



ADEQ0017704

ASSIGNMENT AND ASSUMPTION AGREEMENT

THIS ASSIGNMENT AND ASSUMPTION AGREEMENT (the "Agreement") is entered into effective as of June 1, 1997, by and between Cedar Chemical Corporation, a Delaware corporation, ("Cedar") and Rhone-Poulenc Ag Company, a Delaware corporation, ("RPAC").

W I T N E S S E T H:

WHEREAS, Cedar and Micro Flo Company, a Georgia corporation, ("Micro Flo") have entered into a Supply Agreement, a true and correct copy of which is attached hereto as Exhibit A (the "Supply Agreement") pursuant to which Cedar is obligated to supply and Micro Flo is obligated to purchase certain quantities of Ethephon (hereinafter "Product") in accordance with the terms and conditions of the Supply Agreement; and

WHEREAS, Cedar has entered into a Memorandum of Understanding with Rhone Poulenc Agrochimie SA, a French corporation, (hereinafter "RPA"), pursuant to which Cedar expects to enter into a definitive agreement to produce certain products for RPA for an extended term (hereinafter referred to as the "Term"), subject, however, to Cedar's being relieved by Micro Flo of its obligations under the Supply Agreement in accordance with the terms hereof; and

WHEREAS, RPAC desires to assume and perform Cedar's obligations under the Supply Agreement with Micro Flo in accordance with the terms and conditions hereof.

NOW, THEREFORE, in consideration of the premises and the mutual covenants set forth herein, the parties agree as follows:

1. Assignment. Subject to the provisions of Paragraph 3 of this Agreement, Cedar hereby assigns to RPAC its entire right, interest and obligations in and under the Supply Agreement effective as of the date first above appearing (the "Effective Date") and continuing thereafter throughout the Term referred to herein, but in any event through October 1997.

2. Assumption. As of the Effective Date, subject to the provisions of Paragraph 3 of this Agreement, RPAC assumes and agrees to perform Cedar's obligations under the Supply Agreement throughout the Term referred to herein, but in any event through October 1997.

3. Inventory. Cedar's entire inventory of Product (the "Inventory") totalling approximately 328,000 pounds on a 100% active ingredient basis as of the Effective Date hereof will be sold to Micro Flo at a price of \$3.63 per pound (the "Purchase Price") by not later than October 1997. The exact quantity of Cedar's Inventory sold to Micro Flo shall be certified to RPAC by Cedar on or before November 15, 1997, which quantity shall be subject to verification and audit by RPAC at its expense. In the event Micro Flo's Net Selling Price (as defined in the Supply Agreement) for the period April through October 1997 shall exceed \$31.00 per pound, RPAC shall sell direct Micro Flo to pay to Cedar such increase in the Purchase Price for that quantity of Inventory sold by Cedar to Micro Flo, as aforesaid, determined in accordance with the schedule set forth on Exhibit B to the Supply Agreement. RPAC shall cause such sum to be paid to Cedar within fifteen (15)

days of the date of determination of the adjusted Purchase Price in accordance with the terms of the Supply Agreement.

4. Commissions. RPAC shall pay to Cedar a commission of \$1.35 per pound for all quantities of Product sold by RPAC to Micro Flo up to 1,250,000 pounds in each calendar year during the Term hereof; provided that, for the 1997 calendar year, Cedar's commissions shall be payable with respect to all quantities of Product sold by RPAC to Micro Flo in said calendar year; provided further that, in said calendar year, RPAC shall pay commissions determined hereunder on no less than 1,250,000 pounds of Product less the number of pounds of Product in Cedar's Inventory sold by Cedar to Micro Flo, as determined in accordance with Paragraph 3 of this Agreement. Commissions hereunder shall be payable to Cedar sixty (60) days from the date of each such shipment to Micro Flo. Any payment required by RPAC in order for its commissions payable for the calendar year 1997 to total the minimum commissions payable in said year, as aforesaid, shall be due and payable to Cedar the 1st day of March, 1998. Cedar's said commission on sales of Product sold to Micro flo in each calendar year during the Term referred to herein shall be increased by the amount by which the price of Product sold by RPAC to Micro Flo shall exceed \$3.63 per pound, as determined under Paragraph 4 of the Supply Agreement, such additional commissions, if any, to be due and payable by RPAC to Cedar within fifteen (15) days following the determination of Micro Flo's Final Net Selling Price under the Supply Agreement in each calendar year during the Term referred to herein. It is understood

that, subject to Cedar and RPA entering into one or more agreements as contemplated under the MOU, this Agreement shall be amended to suspend RPAC's obligation to pay commissions on sales of Micro Flo under the Supply Agreement during each calendar year during the Term hereof following the 1997 calendar year.

5. Reassignment. In the event of the expiration or termination of the Term of Cedar's anticipated contract with RPA prior to December 31, 2006, or, if Cedar and RPA shall not have entered into such a contract by October 31, 1997, RPA shall, immediately upon notice by Cedar, reassign to Cedar its entire right, interest and obligations under the Supply Agreement, and, in that event, Cedar shall reassume and perform all of its obligations thereunder from and after the date of such reassignment, whereupon Cedar's rights and RPAC's obligations under this Agreement shall terminate except for such rights and obligations as shall have accrued as of the Effective Date of such reassignment.

6. Condition Precedent. This Agreement shall be effective only upon Micro Flo's execution and delivery to Cedar and RPAC of the Consent Agreement in the form attached hereto as Exhibit B.

7. Warranties and Covenants.

A. RPAC warrants and covenants as follows:

(1) It has full power and authority to execute and deliver this Agreement and to perform its obligations hereunder. This Agreement constitutes the valid and legally binding obligation of RPAC, enforceable in accordance with its terms.

(2) Neither the execution and delivery of this Agreement nor the consummation of the transactions contemplated hereby will violate any provision of RPAC's Charter or By-Laws nor conflict with, result in a breach of, constitute a default under, or require any notice under any agreement to which RPAC is a party or by which it is bound.

(3) It will comply fully with the terms of the Supply Agreement assumed by it hereunder, and it will not during the Term hereof enter into any amendment of the Supply Agreement nor otherwise alter or assign the Supply Agreement without Cedar's prior written consent.

B. Cedar warrants and covenants as follows:

(1) It has full power and authority to execute and deliver this Agreement and to perform its obligations hereunder. This Agreement constitutes the valid and legally binding obligation of Cedar, enforceable in accordance with its Terms.

(2) Neither the execution and delivery of this Agreement nor the consummation of the transactions contemplated hereby will violate any provision of Cedar's Charter or By-Laws nor conflict with, result in a breach of, constitute a default under, or require any notice under any agreement to which Cedar is a party or by which it is bound.

(3) The Supply Agreement attached hereto as Exhibit A is in full force and effect; neither Cedar nor Micro Flo is in default of the terms thereof; and there are no terms or

conditions with respect thereto which are not set forth in said Exhibit A.

8. Indemnification by RPAC. RPAC shall indemnify, defend, and hold harmless Cedar against and in respect of any and all claims, demands, losses, costs, expenses, obligations, liabilities, damages, recoveries, and deficiencies, including reasonable attorney's fees (collectively "Damages"), that Cedar incurs or suffers, which arise, result from, or relate to, any breach of, or failure by RPAC to perform, any of its representations, warranties, covenants or agreements set forth herein.

9. Indemnification by Cedar. Cedar shall indemnify, defend, and hold harmless RPAC against and in respect of any and all claims, demands, losses, costs, expenses, obligations, liabilities, damages, recoveries, and deficiencies, including reasonable attorney's fees (collectively "Damages"), that RPAC incurs or suffers, which arise, result from, or relate to, any breach of, or failure by Cedar to perform, any of its representations, warranties, covenants or agreements set forth herein.

10. Miscellaneous:

A. Survival. All of the representations and warranties of the parties contained in Paragraph 7 of this Agreement shall survive the Effective Date indefinitely.

B. Entire Agreement, Amendments. This Agreement constitutes the entire agreement between the parties and supersedes

any prior understandings, agreements, or representations by or between the parties, written or oral, to the extent they relate in any way to the subject matter hereof. No amendment of any provision of this Agreement shall be valid unless the same shall be in writing and signed by RPAC and Cedar.

C. Succession and Assignment. This Agreement shall be binding upon and inure to the benefit of the parties named herein and their respective successors and permitted assigns. No party may assign either this Agreement or any of its rights, interest, or obligations hereunder without the prior written approval of the other party.

D. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original but all of which together will constitute one and the same instrument.

E. Headings. The section headings contained in this Agreement are inserted for convenience only and shall not affect in any way the meaning or interpretation of this Agreement.

F. Notices. All notices, requests, demands, claims, and other communications hereunder will be in writing. Any notice, request, demand, claim, or other communication hereunder shall be deemed duly given if it is sent by registered or certified mail, return receipt requested, postage prepaid (and then two business days after), or if it is sent by a nationally-recognized overnight courier service (and then one business day after), and addressed to the intended recipient as set forth below:

If to Cedar:

J. Randal Tomblin
President, Organics
Division
Cedar Chemical Corporation
24th Floor, Clark Tower
5100 Poplar Avenue
Memphis, TN 38137

If to RPAC:

G. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware, without giving effect to any choice or conflict of law provision or rule.

H. Severability. Any germ or provision of this Agreement that is invalid or unenforceable in any situation in any jurisdiction shall not affect the validity or enforceability of the remaining terms and provisions hereof or the validity or enforceability of the offending term or provision in any other situation or in any other jurisdiction.

EXECUTED by the parties as of the effective date hereof.

ATTEST:

CEDAR CHEMICAL CORPORATION

J. Randal Tomblin

BY: *J. Randal Tomblin*

J.P.

RHONE-POULENC AG COMPANY

BY: *[Signature]*

CEDAR WEST HELENA

PURCHASE ORDER
RECEIVING DEPT. COPYP.O. NO. CHG
04-066882 00

P.O. DATE: 6/24/97 PAGE

REQUISITIONER: CHRISTIAN

VENDOR: RHONE POULENC SECTEUR AGR
14 20 RUE PIERRE DAIJET
BP 7103
LYON CEDEX 07 FRANCE
67203

DATE REC.:	INV. NO.:
VIA:	VENDOR REF.:
PRO NO.:	SHIPPER WOHNT:
FRT. CHARGE:	FPD/COLL:
SHIPPER NO:	REC. BY:

SHIP FROM:	F.O.D.:	FREIGHT TERMS:	VENDOR NO.:
SHIP VIA:	DUTY NOT PAID	BUYER	24804 - 04
	DATE REQUIRED:	PAYMENT TERMS:	TAX PERMIT:
	6/20/77	N90 CIF NOLA	3553

ITEM	QUANTITY ORDERED	QUANTITY RECEIVED	UNIT	INVENTORY NUMBER	DESCRIPTION	ACCOUNT NUMBER	UNIT PRICE
20	370,400		LBS	4 0150	DCPI 98% MIN C OF A REQUIRED	8 715 1460	2.36 LBS

SHIP FROM FRANCE
TO BE SHIPPED IN 2 150 TANKS

PRODUCT PRODUCED FROM R P DCA
THIS DCPI THRU FTZ

THIS P.O. REPLACES#04 050577

*** CONFIRMATION ***

AB0000018584

RAW MATERIAL RECEIVING RECORD N^o 10015

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
12:15

RECEIVED BY
Michael

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

6-25-97 0109611 CCRU/197213-0 Net: ~~43100~~

SHIPPER CARRIER
Hilsco / Hinds *Triple E* 42879

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit #2	40150	DCP1

COMMENTS
Lab Has C.O.A.

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB
mta wld 12:50 Lab has CoA

UNLOADED AT (tank number, unit, warehouse, etc.)
Hold at Unit until we need it

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>W</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

COMMENTS
CoA 99.65

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
<i>[Signature]</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

PLANT WEIGHT	UNLOADING TIMES	
NET 42140	START TIME 6/25/97 13:00	END TIME

COMMENTS

CENSUS USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICEAPPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION

19 CFR 146.22, 146.32, 146.35, 146.37, 146.39-146.41, 146.44, 146.53, 146.66

1 ZONE NO AND LOCATION (Address)
CEDAR CHEMICAL CORPORATION
FTZ 14B
HIGHWAY 242 SOUTH
WEST HELENA, ARKANSAS 72390

2 DISTRICT/PORT CODE
20-06 MEMPHIS, TENNESSEE

3 IMPORTING VESSEL (& FLAG)/OTHER CARRIER
(MX) M/V NUEVO LEON V.30W

4 EXPORT DATE
5/17/97

5 IMPORT DATE
6/7/97

6 ZONE ADMISSION NO
19470625-10

7 U.S. PORT OF UNLADING
NEW ORLEANS, LA.

8 FOREIGN PORT OF LADING
LE HAVRE

9 BILL OF LADING/AWB NO
TEMULHNLN30W0628

10 INWARDManifest NO
N/A

11 INBOND CARRIER
TRIPLE E TRANSPORT

12 IT NO AND DATE
#313,963,580 6/24/97

13 IT FROM (Port)
NEW ORLEANS, LA.

14 STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT? ☐ YES ☐ NO

15 NO OF PACKAGES AND COUNTRY OF ORIGIN	16 DESCRIPTION OF MERCHANDISE	17 HTSUS NO	18 QUANTITY (HTSUS)	19 GROSS WEIGHT	20 SEPARATE VALUE & AGGR CHGS
1 C/O FR	(20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II EMERGENCY TELEPHONE: (800) 424-9390 CONTAINER NBR CCRU-1972130 ZONE-TO-ZONE TRANSFER NPF FTZ #2 ADMISSION No. 23971	2929.10.3000	19450 KG	24070 KG	\$102112.CI \$1493.ND \$100619.FO
21 HARBOR MAINTENANCE FEE (19 CFR 24.24) <input type="checkbox"/>					\$125.77

22 I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations.

23 I hereby apply for the status designation indicated:

☒ NONPRIVILEGED FOREIGN
(19 CFR 146.42)

☐ PRIVILEGED FOREIGN
(19 CFR 146.41)

☐ ZONE RESTRICTED
(19 CFR 146.44)

☐ DOMESTIC
(19 CFR 146.43)

24 APPLICANT FIRM NAME
CEDAR CHEMICAL CORPORATION

25 (Signature)
Bob Christen

26 TITLE
MGR PURCH.

27 DATE
7-3-97

FTZ AGREES TO RECEIVE
MERCHANDISE INTO THE ZONE ☒

28 FOR THE FTZ OPERATOR (Signature)
Bob Christen

29 TITLE
MGR PURCH.

30 DATE
7-3-97

PERMIT
Permission is hereby granted to transfer the above merchandise into the Zone.

31 DISTRICT DIRECTOR OF CUSTOMS BY (Signature)

32 TITLE

33 DATE

PERMIT
The above merchandise has been granted the requested status

34 DISTRICT DIRECTOR OF CUSTOMS BY (Signature)

35 TITLE

36 DATE

37 The goods described herein are authorized to be transferred ☐ without exception ☐ except as noted below

PERMIT
TO
TRANSFER

38 CUSTOMS OFFICER AT STATION (Signature)

39 TITLE

40 STATION

41 DATE

42 RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)

43 CARTMAN

44 CHL NO

45 DATE

FTZ
OPERATOR'S
REPORT OF
MERCHANDISE

46 To the District Director of Customs The above merchandise was received at the Zone on the date shown except as noted below

47 (Signature)
Bob Christen

48 (Signature)
MGR PURCH.

49 DATE
7-3-97

50 RECEIVED AT ZONE

Customs Form 214 (020691)

AB0000018604

WEIGHED ON A FAIRBANKS SCALE

DATE 6/25/97

CUSTOMERS NAME Cedar Chem.

ADDRESS W. Helena, Ar

COMMODITY DCPT

CARRIER Triple E

REMARKS 5c No. - CCRU 197213.0

7040 12:11PM JN 25 97 gross wt.

7160 tractor only

59880 tractor & fuel trailer

16900
42980 Net Product

LBS. GROSS

LBS. TARE - DRIVER ON OFF X

LBS. NET @ PER LB. PRICE

SHIPPER

WEIGHER

FAIRBANKS SCALE CAT. 083905

WEIGHED ON A FAIRBANKS SCALE

DATE 7-3-97

CUSTOMERS NAME GULF States MAR WFO

ADDRESS ABABI, LA

COMMODITY DCPT Residue

CARRIER TRIPLE E

REMARKS

33900 08:42AM JL 03 97 Tractor & mt container LBS. GROSS

LBS. TARE - DRIVER ON OFF

LBS. NET @ PER LB. PRICE

SHIPPER Lester Allen

WEIGHER

Tractor
17000

08:36AM JL 03 97

16900 mt container

FAIRBANKS SCALE CAT. 083905

D

Approved through 01/31/94, OMB No. 1515-0086

CENSUS USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICEAPPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION

19 CFR 146.22, 146.32, 146.33-146.37, 146.39-146.41, 146.44, 146.53, 146.68

1. ZONE NO. AND LOCATION (Address)
CEDAR CHEMICAL CORPORATION
FTZ 148
HIGHWAY 242 SOUTH
WEST HELENA, ARKANSAS 72390

2. DISTRICT/PORT CODE
20-06 MEMPHIS, TENNESSEE

3. IMPORTING VESSEL (& FLAG)/OTHER CARRIER (MX) M/V NUEVO LEON V.30W	4. EXPORT DATE 5/17/97	5. IMPORT DATE 6/7/97	6. ZONE ADMISSION NO. 14470625-10
7. U.S. PORT OF UNLADING NEW ORLEANS, LA.	8. FOREIGN PORT OF LADING LE HAYRE	9. BILL OF LADING/AWB NO. TEMULHNLN30W0628	10. INWARD M'ESTY NO. N/A
11. INBOUND CARRIER TRIPLE E TRANSPORT	12. LT. NO. AND DATE #319,963,580 6/24/97	13. LT. FROM (Port) NEW ORLEANS, LA.	
14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT? <input type="checkbox"/> YES <input type="checkbox"/> NO			

15. NO. OF PACKAGES AND COUNTRY OF ORIGIN	16. DESCRIPTION OF MERCHANDISE	17. HTSUS NO.	18. QUANTITY (HTSUS)	19. GROSS WEIGHT	20. SEPARATE VALUE & AGGR CHGS
1	(20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II EMERGENCY TELEPHONE: (800) 424-9390 CONTAINER NBR CCRU-1972130 ZONE-TO-ZONE TRANSFER NPF FTZ #2 ADMISSION No. 23971	2929.10.3000	19450 KG	24070 KG	\$102112.C1 \$1493.NO \$100619.F0
21. HARBOR MAINTENANCE FEE (19 CFR 24.24) <input checked="" type="checkbox"/>					\$125.77

22. I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations.

23. I hereby apply for the status designation indicated:

☒ NONPRIVILEGED FOREIGN
(19 CFR 146.42)☐ PRIVILEGED FOREIGN
(19 CFR 146.41)☐ ZONE RESTRICTED
(19 CFR 146.44)☐ DOMESTIC
(19 CFR 146.43)

24. APPLICANT FIRM NAME CEDAR CHEMICAL CORPORATION	25. SIGNATURE <i>[Signature]</i>	26. TITLE MGR Purch.	27. DATE 7-3-97
F.T.Z. AGREES TO RECEIVE MERCHANDISE INTO THE ZONE <input checked="" type="checkbox"/>	28. SIGNATURE <i>[Signature]</i>	29. TITLE MGR Purch.	30. DATE 7-3-97
PERMIT Permission is hereby granted to transfer the above merchandise into the Zone.	31. DISTRICT DIRECTOR OF CUSTOMS: BY (Signature) <i>[Signature]</i>	32. TITLE SI	33. DATE 7/1/97
PERMIT The above merchandise has been granted the requested status.	34. DISTRICT DIRECTOR OF CUSTOMS: BY (Signature) <i>[Signature]</i>	35. TITLE SI	36. DATE 7/1/97

37. The goods described herein are authorized to be transferred:

☐ without exception☐ except as noted below

PERMIT TO TRANSFER	38. CUSTOMS OFFICER AT STATION (Signature) <i>[Signature]</i>	39. TITLE SF	40. STATION	41. DATE 7/1/97
	42. RECEIVED FOR TRANSFER TO ZONE (Driver's Signature) <i>[Signature]</i>	43. CARTMAN	44. CHL NO.	45. DATE
FTZ OPERATOR'S REPORT OF MERCHANDISE RECEIVED AT ZONE	46. To the District Director of Customs. The above merchandise was received at the Zone on the date shown except as noted below:			
	47. SIGNATURE <i>[Signature]</i>	48. TITLE MGR Purch.	49. DATE 7-3-97	

(Paperwork Reduction Act Notice on Reverse)

Customs Form 214 (020691)

REF: 973245.

49 CFR 10.60, 10.61, 18, 123.41, 123.42

TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT

403

Form Approved
OMB No. 1515-0005

FTZ Entry No. 23971

Port NEW ORLEANS, LA.

Date 6/11/97

UNITED STATES CUSTOMS SERVICE

Dist No 20 Port Code No 02 First U.S. Port of Unloading NEW ORLEANS, LA.

Port of NEW ORLEANS, LA. Date 6/24/97

Entry No. 313,963,580

Class of Entry I.T.
(I.T.)(Wd.T.)(Wd.Ex.)(T.E.)(Drawback, etc.)Entered or imported by CEDAR CHEMICAL CORPORATION to be shipped
in bond via TRIPLE E TRANSPORT BOND No. 209100312 consigned to

District Director of Customs At 2006 MEMPHIS, TN Final foreign destination

Consignee CEDAR CHEMICAL CORP. FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, AR 72390
(At customs port of exit or destination)

Foreign port of lading LE HAVRE B/L No. TEMULHNLN30W0628 Date of sailing 5/17/97

Imported on the M/V NUEVO LEON V.30W Flag MX on 6/7/97 via DIRECT
(Name of vessel or carrier and motive power) (Date imported) (Last foreign port)Exported from FRANCE on 5/17/97 Goods now at FOREIGN TRADE ZONE No. 2
(Country) (Date) (Name of warehouse, station, pier, etc.)

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
CCRU-1972130	1 (20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSUS 2929.10.3000 C/O FR MFG: FRRHOAGR1420LYO ZONE-TO-ZONE TRANSFER NPF FTZ #2 ZONE ADMISSION #23971	53065	102112	EST.	NOT VERIFIED

FTZ 14B
DIRECT DELIVERY PROGRAM
6-25-97
Bob Chitt
SIGNATURE

GO No.

CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND
AND/OR LADING FOR EXPORTATION FOR

2006 MEMPHIS, TENNESSEE

WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-
DESCRIBED GOODS WEREDelivered to the Carrier
named above, for delivery to
the District Director of
Customs at destination sealed
with Customs sealsNos
or the packages (were) (were
not) labeled, or corded and
sealed.

Laden on the—

(Vessel, vehicle or aircraft)

which cleared for—

on (Date)

as verified by export records

(Inspector or warehouse officer)

(Date)

(Inspector)

(Date)

I truly declare that the statements contained herein are true and
correct to the best of my knowledge and beliefEntered or withdrawn by:
CEDAR CHEMICAL CORPORATION
by PHILBIN, CAZALAS & ST. JOHN, INC.
Atty in factTo the Inspector or Warehouse Officer the above described
goods shall be disposed of as specified herein

For the District Director of Customs.

Received from the District Director of Customs of above district the
merchandise described in this manifest for transportation and delivery
into the custody of the customs officers at the port named above,
all packages in apparent good order except as noted hereon.

TRIPLE E TRANSPORT

Attorney or Agent of Carrier

Customs Form 7512 (040984)

AB0000018604

Consult customs officer or Part 18, Customs Regulations for the appropriate number of copies required for entry, withdrawal, or manifest purposes.
 For the purpose of transfer under the cartage or lighterage provisions of a proper bond to the place of shipment from the port of entry, extra copies bearing a stamp or notation as to their intended use may be required for local administration.
 As the form is the same whether used as an entry or withdrawal or manifest, all copies may be prepared at the same time by carbon process, unless more than one vessel or vehicle is used, in which case a separate set of manifest must be prepared for each such vessel or vehicle.
 Whenever this form is used as an entry or withdrawal care should be taken that the kind of entry is plainly shown in the block in the upper right-hand corner of the face of the entry.
 This form may be printed by private parties provided that the supply printed conforms to the official form in size, wording, arrangement, and quality and color of paper and ink. For sale by District Directors of Customs.

RECORD OF CARTAGE OR LIGHTERAGE

Delivered to Cartman or Lighterman in apparent good condition except as noted on this form.

CONVEYANCE	QUANTITY	DATE	DELIVERED	RECEIVED	RECEIVED
<i>Triple E CHB-209 100 312</i>	<i>1 contain</i>	<i>4/24/77</i>	<i>Arthur J. Lighterage Inspector of Warehouse Officer</i>	<i>Triple E Kenneth D. Baker Cartman or Lighterman</i>	<i>(Date) (Inspector)</i>
			(Inspector of Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
			(Inspector of Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
Total			(Warehouse proprietor)		

CERTIFICATES OF TRANSFER (If required)

CERTIFICATE OF TRANSFER (If required)	INSPECTED
I certify that within - described goods were transferred by reason of to on at and sealed with or seals Nos and that goods were in same apparent condition as noted on original lading except	I certify that within - described goods were transferred at on (Date) and seals found and sealed with or seals Nos and that goods were in same apparent condition as noted on original lading except Inspector, Conductor or Master

If transfer occurs within city limits of a customs port or station - customs officers must be notified to supervise transfer

INSPECTOR'S REPORT OF DISCHARGE AT DESTINATION

Port Station (Date)

TO THE DISTRICT DIRECTOR OF CUSTOMS Delivering line Car No Initial
 Arrived (Date) Condition of car of seals of packages

Date of Delivery to Importer or Gen Order	PACKAGES	No and Kind of Entry or General Order	Box No, Truck or Lighter No	CONDITIONS

I certify above report is correct Inspector

REF: 973245.
49 CFR 10.60, 20.61, 18, 123.41, 123.42

TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT

403

Form Approved
OMB No. 1515-0005

FTZ Entry No. 23971
Port NEW ORLEANS, LA.
Date 6/11/97

UNITED STATES CUSTOMS SERVICE
Dist No. 20 Port Code No. 02 First U.S. Port of Unloading NEW ORLEANS, LA.
Port of NEW ORLEANS, LA. Date 6/24/97

Entry No. 313,963,580

Class of Entry I, I, I
(LT, (Wd.T.), (Wd.E.), (T.E.), (Drawback), etc.)

Entered or imported by CEDAR CHEMICAL CORPORATION to be shipped
in bond via TRIPLE E TRANSPORT BOND No. 209100312 consigned to
(CHI. Number) (Vessel or carrier) (Car number and initial) (Pier or station)
District Director of Customs At 2006 MEMPHIS, TN Final foreign destination
Consignee CEDAR CHEMICAL CORP. FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, AR 72390
(For exportations only)
Foreign port of lading LE HAVRE B/L No. TEMULHNLN30W0628 Date of sailing 5/17/97
Imported on the M/V NUEVO LEON V.30W Flag MX on 6/7/97 via DIRECT
(Name of vessel or carrier and motive power) (Date imported) (Last foreign port)
Exported from FRANCE on 5/17/97 Goods now at FOREIGN TRADE ZONE No. 2
(Country) (Date) (Name of warehouse, station, pier, etc.)

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
CCRU-1972130	1 (20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSUS 2929.10.3000 C/O FR MFG: FRRHOAGR1420LYO ZONE-TO-ZONE TRANSFER NPF FTZ #2 ZONE ADMISSION #23971	53065	102112	EST.	NOT VERIFIED

FTZ 14B
DIRECT DELIVERY PROGRAM
6-25-97
Bob Chinter
SIGNATURE

GO No.
CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND
AND/OR LADING FOR EXPORTATION FOR
2006 MEMPHIS, TENNESSEE
(Port)
WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-
DESCRIBED GOODS WERE
Delivered to the Carrier
named above, for delivery to
the District Director of
Customs at destination sealed
with Customs seals
Nos.
or the packages (were) (were
not) labeled, or corded and
sealed.
(Inspector or warehouse officer)
(Date)

Laden on the—
(Vessel, vehicle, or aircraft)
which cleared for—
on (Date)
as verified by export records
(Inspector)
(Date)

I truly declare that the statements contained herein are true and
correct to the best of my knowledge and belief.

Entered or withdrawn by:
CEDAR CHEMICAL CORPORATION
by PHILBIN, CAZALAS & ST. JOHN, INC.
Atty in fact

To the Inspector or Warehouse Officer, the above-described
goods shall be disposed of as specified herein.

For the District Director of Customs
Received from the District Director of Customs, of above district, the
merchandise described in this manifest for transportation and delivery
into the custody of the customs officers at the port named above,
all packages in apparent good order except as noted hereon

TRIPLE E TRANSPORT

Attorney or Agent of Carrier

This form may be printed by private parties provided that the supply printed conforms to the official form in size, wording, arrangement, and quality and color of paper and ink. For sale by District Directors of Customs.

ed in this form:

CONVAYANCE	QUANTITY	DATE	DELIVERED	RECEIVED	RECEIVED
Triple E CHB-209 100 3/2	1 Containr	6/24/77	Attn: J. H. [Signature] [Signature] (Inspector or Warehouse Officer)	J. Triple E Kenneth Salatch (Cartman or Lighterman)	(Date) (Inspector)
			(Inspector or Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
			(Inspector or Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
F-4			Warehouse proprietor		

CERTIFICATES OF TRANSFER (If required)		INSPECTED
I certify that within - described goods were transferred	I certify that within - described goods were transferred	at
by reason of	by reason of	on (Date)
to	to	and seals found
on at	on at .....	.....
and sealed with or seals	and sealed with or seals	.....
Nos and that	Nos and that	.....
goods were in same apparent condition as noted on	goods were in same apparent condition as noted on	.....
original lading except	original lading except .....	.....
.....
Inspector, Conductor or Master	Inspector, Conductor or Master	Inspector

If transfer occurs within city limits of a customs port or station, customs officers must be notified to supervise transfer.

INSPECTOR'S REPORT OF DISCHARGE AT DESTINATION

[illegible]

TO THE DISTRICT DIRECTOR OF CUSTOMS Delivering here _____ Car No. _____ Initial _____
Arrived _____ Condition of car _____ of seals _____ of packages _____

Date of Delivery to Importer, or from Order	PACKAGES	No and Kind of Entries on Import Order	Boiler, Truck or Engine No.	CONDITIONS etc.

I certify above report is correct

.. Inspector

TOLOCHIMIE

ADRESSER VOTRE CORRESPONDANCE A :

TOLOCHIMIE - Impasse PALAYRE
B P 1196 - 31037 TOULOUSE CEDEX 1
TEL. 05 61 31 78 78
TÉLÉCOPIE 05 61 31 78 50

N / REF : MF / ML

DATE 14-Mai-97

CEDAR

COMMANDE
EXPEDITION

N° 40124462
N° 429
DU 14/05/97

CAMION CITERNE
CONTAINER
WAGON

N°
N° CCRU 197213-0
N°

N° DE LOT DU PRODUIT

B303A/14.5.97.5

N° DE LOT DU CONDITIONNEMENT

(s' il y a lieu)

CERTIFICAT D'ANALYSE DU 3,4-DICHLOROPHENYLISOCYANATE (ex 3,4-DCA CEDAR)

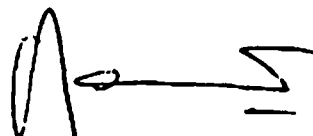
Nous certifions que le produit ci-dessus a la composition suivante :

M E T H O D E	Détermination	Valeur	Unité	Spécification	Méthode d'analyse Tolochimie
1	aspect	conforme		solide blanc	Visuelle
2	3,4-dichlorophénylisocyanate	99.65	%	> 98.5	To 10.27.88
2	2,3-dichlorophénylisocyanate	0.27	%	pour information	To 10.27.88
2	3-chloro + 4-chlorophénylisocyanate	0	%	pour information	To 10.27.88
2	monochlorobenzène	0	%	< 0.2	To 10.27.88
2	semi-lourds	0.02	%	< 0.8	To 10.27.88
autre	Isocyanate de chlorotolyle	0.06	%		To 10.27.88
autre			%		

principe de la méthode:

1	visuelle
2	C.P.G
autre	
autre	

LE RESPONSABLE DU CONTROLE ANALYTIQUE



AB0000018604

RHONE-POULENC AGRO

14-20 RUE PIERRE BAIZET B P 9163
69263 LYON CEDEX 09 - FRANCE
TEL 04 72 85 25 25 - FAX 04 72 85 27 99
TLX 310 098 F RHONE
N° IDENTIFICATION TVA FR 93 969 503 309

ORIGINAL

INVOICE FOR CREDIT DATED 27. 01. 91
N° 14/20

14/20 RUE PIERRE BAIZET
69263 LYON CEDEX 09
TEL 04 72 85 25 25
FAX 04 72 85 27 99
TLX 310 098 F RHONE
N° IDENTIFICATION TVA FR 93 969 503 309

14/20 RUE PIERRE BAIZET
69263 LYON CEDEX 09
TEL 04 72 85 25 25
FAX 04 72 85 27 99
TLX 310 098 F RHONE
N° IDENTIFICATION TVA FR 93 969 503 309

14/20 RUE PIERRE BAIZET
69263 LYON CEDEX 09
TEL 04 72 85 25 25
FAX 04 72 85 27 99
TLX 310 098 F RHONE
N° IDENTIFICATION TVA FR 93 969 503 309

EU : NEW OPLENNE

14/20 RUE PIERRE BAIZET
69263 LYON CEDEX 09
TEL 04 72 85 25 25
FAX 04 72 85 27 99
TLX 310 098 F RHONE
N° IDENTIFICATION TVA FR 93 969 503 309

SA : 2001000

14/20 RUE PIERRE BAIZET
69263 LYON CEDEX 09
TEL 04 72 85 25 25
FAX 04 72 85 27 99
TLX 310 098 F RHONE
N° IDENTIFICATION TVA FR 93 969 503 309

14/20 RUE PIERRE BAIZET

14/20 RUE PIERRE BAIZET

14/20 RUE PIERRE BAIZET 69263 LYON CEDEX 09

14/20 RUE PIERRE BAIZET 69263 LYON CEDEX 09
14/20 RUE PIERRE BAIZET 69263 LYON CEDEX 09
14/20 RUE PIERRE BAIZET 69263 LYON CEDEX 09

RHÔNE-POULENC
AGRO
14/20 RUE PIERRE BAIZET B P 9163
69263 LYON CEDEX 09
Tel 04 72 85 25 25 Fax 04 72 85 27 99
S.A. Capital 1 431 515 000 - R.C. LYON 969 503 309

BILL OF LADING for Combined Transport or Port to Port Shipment
(TERMS CONTINUED FROM REVERSE SIDE) Not Negotiable Unless Consigned to Order

Page 2

Vessel **NEVO LEON**Voy. No. **30 W**

Tecomar, s.a. de c.v.
BENJAMIN FRANKLIN No. 232 COL ESCANDON
MEXICO D.F. 06000 TEL: 272-0610 TELEF 017 72990
R.F.C. TEC. 730302 SH7 REG. ESTATAL 18-01 2678-187

LA LINEA MEXICANA ESPECIALIZADA EN CONTENEDORES

RECEIVED by the Carrier from the Merchant in apparent good order and condition (unless otherwise noted herein) the total number of containers or other packages or units indicated below stated by the Merchant to contain the cargo specified below for transportation subject to all the terms hereof (INCLUDING THE TERMS ON THE REVERSE HERE OF AND THE TERMS OF THE CARRIER'S APPLICABLE TARIFF) from the Place of Acceptance to the Place of Delivery on presentation of this document (duly endorsed) to the Carrier by or on behalf of the Merchant, the rights and liabilities arising in accordance with the terms hereof shall (without prejudice to any rule of common law or statute rendering them binding upon the Merchant) become binding in all respects between the Carrier and Holder as through the contract contained before or evidenced hereby had been made between them.

CONTAINERS AND/OR CARGO ON DECK It is expressly agreed between the Merchant and the Sea-Carrier that Goods stowed into Containers may be loaded on or under deck at the option of the Carrier and that the provisions of the Hague Rules as incorporated herein shall be applicable in all cases whether the transport is carried out on or under deck. Also the Goods and/or Containers shall contribute in General Average whether carried on or under deck.

IN WITNESS whereof the number of original Bills of Lading stated below have been signed one of which being accomplished The others to be void.

(Terms of B.L. continued on the back here of)

STOLT-NIELSEN S.A. P/C
PHONE FOULENC SECTEUR AGRO
14/20 RUE PIERRE BAIZET
B.P. NO 9163
69 263 LYON - FRANCE -

TO THE ORDER OF:
CEDAR CHEMICAL CORPORATION
HWY 242 SOUTH - PO BOX 2749
WEST HELENA AR. 72390
ATTN: BOB CHRISTIAN

STOLT-NIELSEN S.A. NOTIFY:
GILSCOT - GUIDROZ INTERNATIONAL
2815 DIVISION STREET - SUITE 202 -
METairie LA 70002 - U.S.A. -
ATTN: KATH GUIDROZ
TEL: 504-887-8837 FAX: 504-887-8838

STOLT TANKCONTAINERS INC.
15602 JACINTOPORT BLVD.
HOUSTON, TX 77015 - U.S.A. -
ATTN: KEVIN FALLON
TEL: 1 (281) 457-1080

COPY NOT NEGOTIABLE

Port of Loading	Port of Discharge	For Transshipment to	Place of Delivery	Export Reference
LE HAVRE	NEW ORLEANS			

PARTICULARS DECLARED BY THE SHIPPER

Container No	Seal No.	Marks and Nos	NR and Grd of Pkgs	Description of Goods	Gross weight (Kilos)	Measurement (Cu M.)
CCML 37213/0				7X20' SHIPPER'S OWNED TANKCONTAINERS SAID TO CONTAIN BULKS OF:	19T450	N. WGT
EXMUL30581/1				3,4-DICHLOROPHENYLISOCYANATE (3,4 D.C.P.I.) - TOXIC LIQUID	4T620	TARE
STPJ197006/4				HAZARDOUS CARGO:	19T500	N. WGT
LIGN243157/3				CL: 6.1 ONU: 2250 P.G.: II	4T000	TARE
SNITL20073/2				SECURITY SHEET: 6.1 - 04	17T750	N. WGT
CCML37079/6				M.F.A.G. TABLE: 370	3T890	TARE
LIGN243152/4				IN CASE OF EMERGENCY CALL	19T100	N. WGT
				PHONE FOULENC / CHEMTREC NO:	3T700	TARE
				PHONE NUMBER: 1800 424 9390	18T850	N. WGT
					3T160	TARE
					19T550	N. WGT
					4T300	TARE
					18T000	N. WGT
					3T890	TARE

FCL / FCL

10-000 STOWED AND COUNTERED BY THE SHIPPER
Container Basis

Declared value of goods (optional, see clause 12.1.1.1)

THC PREPAID
FREIGHT AS PER MANIFEST

RATES AND CHARGES:

Freight	Notify	Rate	Per	Prepaid	Collect
STOLT TANKCONTAINERS INC. 15602 JACINTOPORT BLVD. HOUSTON, TX 77015 - U.S.A. ATTN: KEVIN FALLON TEL: 1 (281) 457-1080					
<p>Place and date of issue: LE HAVRE 17 MAI 1997</p> <p>Qual de Rougarville 5 F 607 76059 LE HAVRE CEDEX</p> <p>Freight payable at: FOR THE CARRIER TECOMAR S.A. de C.V.</p> <p>FOR EXCLUSIVE USE OF E.O.P. Traffic Type Payer Region</p> <p>Number of original B/L: 3 B/L No. TEMULHNLN30W0628</p>					

By signing this Bill of Lading the Merchant expressly accepts and agrees to all its stipulations, exceptions and conditions whether written or printed, as fully as if signed by each Merchant.

The Merchant's attention is called to the fact that according to clauses 10, 11, 12 and 13 of the Bill of Lading, the liability of the Carrier in most cases limited in respect of loss or damage to the Goods and/or by

INTERMODAL SHIPPING INSTRUCTIONS
HAZARDOUS MATERIAL SECTION

HAZARDOUS MATERIALS:

PROPER SHIPPING NAME: 3, 4 DCPI
TECHNICAL NAME: 3, 4 Dichlorophenyl Isocyanate
HAZARD CLASS: 6.1 UN OR ID #: 2250
PACKING GROUP: II PAGE: 6128
EMERGENCY CONTACT: Bob CHRISTIAN PHONE #: 501-572-3701 ^{EAT}
PLACARDED: POISON REPORTABLE QUANTITY: _____
SPECIAL INSTRUCTIONS: _____

NOTE: IF CONTAINER/TRAILER IS LOADED WITH MORE THAN ONE HAZARDOUS COMMODITY, USE A SEPARATE SHEET TO DESCRIBE EACH COMMODITY AND GIVE THE NUMBER OF PIECES AND WEIGHTS.

THIS IS TO CERTIFY THAT THE HEREIN NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED AND LABELED AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION.

SIGNED: Bob Christian DATED: 6-30-97

CONTAINER: EXFU 130581/1

BOOKING #:

WEIGHT:

**PORT OF
NEW ORLEANS**

July 1, 1997

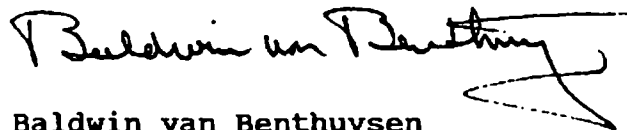
Mr. Bob Christian
Manager, Purchasing
Cedar Chemical Corporation
Post Office Box 2749
West Helena, Arkansas 72390

Dear Mr. Christian:

In accordance with Customs regulations pertaining to the responsibilities of the operator of the transferring zone, we are transmitting to the receiving subzone (FTZ 14B) the enclosed copies of the original custom forms 214 and 7512 as well as the shipping invoice.

The aforementioned documents which are enclosed, relate to the zone transfer of tank containers EXFU 130581-1 and CCRU 197213-0 covered by FTZ #2's zone lot number 23971 and I.T. numbers 313963635 and 313963580 respectively.

Sincerely,



Baldwin van Benthuyzen
Manager
Foreign Trade Zone #2

BVB:nr

Enclosures

REF: 973245.

19 CFR 10.60, 10.61, 18, 123.41, 123.42

TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT

403

Form Approved
OMB No 1515-0005

FTZ Entry No. 23971
Port NEW ORLEANS, LA.
Date 6/11/97

UNITED STATES CUSTOMS SERVICE
Dist No 20 Port Code No 02 First US Port of Unloading NEW ORLEANS, LA.
Port of NEW ORLEANS, LA. Date 6/24/97

Entry No. 313,962,580

Class of Entry: I, T.
(I.T.)(Wd.T.)(Wd.Ex.)(T.E.)(Drawback, etc.)

Entered or imported by CEDAR CHEMICAL CORPORATION to be shipped
in bond via TRIPLE E TRANSPORT BOND No. 209100312 consigned to
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District Director of Customs At 2006 MEMPHIS, TN Final foreign destination
Consignee CEDAR CHEMICAL CORP. FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, AR 72390
(At customs port of exit or destination) (For exportations only)
Foreign port of lading LE HAVRE B/I No. TEMULHNLN30W0628 Date of sailing 5/17/97
Imported on the M/V NUEVO LEON V.30W Flag MX on 6/7/97 via DIRECT
(Name of vessel or carrier and motive power) (Date imported) (Last foreign port)
Exported from FRANCE on 5/17/97 Goods now at FOREIGN TRADE ZONE No. 2
(Country) (Date) (Name of warehouse, station, pier, etc.)

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
CCRU-1972130	1 (20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSUS 2929.10.3000 C/O FR MFG: FRRHOAGR1420LYO ZONE-TO-ZONE TRANSFER NPF FTZ #2 ZONE ADMISSION #23971	53065	102112	EST.	NOT VERIFIED

G.O. No.

CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND
AND/OR LADING FOR EXPORTATION FOR

2006 MEMPHIS, TENNESSEE

WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-
DESCRIBED GOODS WERE

Delivered to the Carrier
named above, for delivery to
the District Director of
Customs at destination sealed
with Customs seals

Nos
or the packages (were) (were
not) labeled, or corded and
sealed.

(Inspector or warehouse officer)

(Date)

Laden on the—

(Vessel, vehicle, or aircraft)

which cleared for—

on (Date)

as verified by export records

(Inspector)

(Date)

I Truly declare that the statements contained herein are true and
correct to the best of my knowledge and belief

Entered or withdrawn by
CEDAR CHEMICAL CORPORATION
by PHILBIN, CAZALAS & ST. JOHN, INC.
Atty in fact

To the Inspector or Warehouse Officer, the above-described
goods shall be disposed of as specified herein

For the District Director of Customs

Received from the District Director of Customs of above district the
merchandise described in this manifest for transportation and delivery
into the custody of the customs officers at the port named above,
all packages in apparent good order except as noted hereon.

TRIPLE E TRANSPORT

Attorney or Agent of Carrier

Customs Form 7512 (040984)

AB0000018585

INSTRUCTIONS

Consult customs officer or Part 18 Customs Regulations, for the appropriate number of copies required for entry, withdrawal, or manifest purposes.

For the purpose of transfer under the carriage or lighterage provisions of a proper bond to the place of shipment from the port of entry, extra copies bearing a stamp or notation as to their intended use may be required for local administration.

As the form is the same whether used as an entry or withdrawal or manifest, all copies may be prepared at the same time by carbon process, unless more than one vessel or vehicle is used, in which case a separate set of manifest must be prepared for each such vessel or vehicle.

Whenever this form is used as an entry or withdrawal care should be taken that the kind of entry is plainly shown in the block in the upper right-hand corner of the face of the entry.

This form may be printed by private parties provided that the supply printed conforms to the official form in size, wording, arrangement, and quality and color of paper and ink. For sale by District Directors of Customs.

RECORD OF CARriage OR LIGHTERAGE

Delivered to Cartman or Lighterman in apparent good condition except as noted on this form

CONVEYANCE	QUANTITY	DATE	DELIVERED	RECEIVED	RECEIVED
<i>Triple E E.H.B. 209 100 312</i>	<i>1 container</i>	<i>6/24/97</i>	<i>Chet L. Lofgren [Signature]</i> (Inspector or Warehouse Officer)	<i>Triple E Kenneth [Signature]</i> (Cartman or Lighterman)	(Date) (Inspector)
			(Inspector or Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
			(Inspector or Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
Total			(Warehouse proprietor)		

CERTIFICATES OF TRANSFER (If required)

INSPECTED

I certify that within - described goods were transferred by reason of _____ to _____ on _____ at _____ and sealed with _____ or seals Nos _____ and that goods were in same apparent condition as noted on original lading except _____ Inspector, Collector or Auditor	I certify that within - described goods were transferred by reason of _____ to _____ on _____ at _____ and sealed with _____ or seals Nos _____ and that goods were in same apparent condition as noted on original lading except _____ Inspector, Collector or Auditor	at _____ on _____ (Date) and seals found _____ Inspector
--	--	---

If transfer occurs within city limits of a customs port or station, customs officers must be notified to supervise transfer

INSPECTOR'S REPORT OF DISCHARGE AT DESTINATION

Port _____ Station _____ Date _____

TO THE DISTRICT DIRECTOR OF CUSTOMS Delivering in _____ Car No _____ Initial _____
Arrived _____ Condition of car _____ of seals _____ of packages _____

Date of Delivery to Importer or Consignee	PN & G	and Bond of Import or Bond of Entry	Bond of Release or Entry No	CONDITIONS ETC

I certify above report is correct

Inspector

REF 973254
10 CFR 10.50, 10.51, 18, 122.41, 123.42TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT

UNITED STATES CUSTOMS SERVICE

403

Entry No. **113,963,635**Class of Entry **I.T. (61)**
(I.T.)(Wd.T.)(Wd.Ex.)(T.E.)(Drawback, etc.)FTZ Entry No. **23971**Port **NEW ORLEANS, LA.**Date **6/11/97**Dist. No. **20** Port Code No. **02** First U.S. Port of Unloading **NEW ORLEANS, LA.**Port of **NEW ORLEANS, LA.** Date **6/30/97**Entered or imported by **CEDAR CHEMICAL CORPORATION** to be shippedin bond via **TRIPLE E TRANSPORT** BOND No. **209100312** consigned to
(Carrier Number) (Vessel or carrier) (Car number and initial) (Pier or station)District Director of Customs At **2006 MEMPHIS, TN** Final foreign destination
(For exportations only)Consignee **CEDAR CHEMICAL CORP. FTZ 148 HIGHWAY 242 SOUTH WEST HELENA, ARKANSAS 72390**
(At customs port of exit or destination)Foreign port of lading **LE HAVRE** B/L No. **TEMULHUN30W0628** Date of sailing **5/17/97**
(Above information to be furnished only when merchandise is imported by vessel)Imported on the **M/V NUEVO LEON V. 30W** Flag **MX** on **6/7/97** via **DIRECT**
(Name of vessel or carrier and motive power) (Date imported) (Last foreign port)Exported from **FRANCE** on **5/17/97** Goods now at **FOREIGN TRADE ZONE No. 2**
(Country) (Date) (Name of warehouse station, pier, etc.)

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
EXFU-130581-1	1 (20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.E.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSUS 2929.10.3000 C/O FR MFG# FRH0AGRI420LYO ZONE-TO-ZONE TRANSFER NPF FTZ #2 ZONE ADMISSION #23971	51808	102375	EST. NOT VERIFIED	

G.O. No.

CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND
AND/OR LADING FOR EXPORTATION FOR**2006 MEMPHIS, TENNESSEE**WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-
DESCRIBED GOODS WEREDelivered to the Carrier
named above, for delivery to
the District Director of
Customs at destination sealed
with Customs sealsNos. _____
or the packages (were) (were
not) labeled, or corded and
sealed

(Inspector or warehouse officer)

(Date)

Laden on the—

(Vessel, vehicle, or aircraft)

which cleared for—

on

(Date)

as verified by export records

(Inspector)

(Date)

I truly declare that the statements contained herein are
correct to the best of my knowledge and belief

Entered or withdrawn by

CEDAR CHEMICAL CORPORATION
by **PHILBIN, CAZALAS & ST. JOHN, INC.**
Atty in factTo the Inspector or Warehouse Officer The above-described
goods shall be disposed of as specified herein

For the District Director of Customs

Received from the District Director of Customs of above district the
merchandise described in this manifest for transportation and delivery
into the custody of the customs officers at the port named above,
all packages in apparent good order except as noted hereon**TRIPLE E TRANSPORT**

Attorney or Agent of Carrier

Customs Form 7512 (040984)

AB0000018585

INSTRUCTIONS

Consult customs officer or Part 18, Customs Regulations, for the appropriate number of copies required for entry, withdrawal, or manifest purposes.

For the purpose of transfer under the cartage or lightering provisions of a proper bond to the place of shipment from the port of entry, extra copies bearing a stamp or notation as to their intended use may be required for local administration.

As the form is the same whether used as an entry or withdrawal or manifest, all copies may be prepared at the same time by carbon process, unless more than one vessel or vehicle is used, in which case a separate set of manifest must be prepared for each such vessel or vehicle.

Whenever this form is used as an entry or withdrawal care should be taken that the kind of entry is plainly shown in the block in the upper right-hand corner of the face of the entry.

This form may be printed by private parties provided that the supply printed conforms to the official form in size, wording, arrangement, and quality and color of paper and ink. For sale by District Directors of Customs.

RECORD OF CARTAGE OR LIGHTERAGE

Delivered to Cartman or Lighterman in apparent good condition except as noted on *Sub. form*

CONVEYANCE	QUANTITY	DATE	DELIVERED	RECEIVED	RECEIVED
<i>Triple E</i>	<i>1 Cartone</i>	<i>6/30/97</i>	<i>Inspector of Warehouse Officer</i>	<i>Triple E</i>	<i>Inspector</i>
<i>Boat 0209100312</i>					
			(Inspector of Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
			(Inspector of Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
			(Inspector of Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
Total			(Warehouse proprietor)		

CERTIFICATES OF TRANSFER (If required)

I certify that within described goods were transferred
by reason of
to
on at
and sealed with or seals
Nos and that
goods were in same apparent condition as noted on
original lading except

I certify that within described goods were transferred
by reason of
to
on at
and sealed with or seals
Nos and that
goods were in same apparent condition as noted on
original lading except

INSPECTED

at
on (Date)
and seals found
Inspector

If transfer occurs within city limits of a customs port or station, customs officers must be notified to supervise transfer

INSPECTOR'S REPORT OF DISCHARGE AT DESTINATION

Port Station (Date)

TO THE DISTRICT DIRECTOR OF CUSTOMS Delivering line Car No. Initial
Arrived (Date) Condition of car of seals of packages

Date of Delivery to Importer, or Gen. Order	PACKAGES	Name and kind of Entry or General Order	Bonded Truck or Lighter No.	CONDITIONS, ETC.

I certify above report is correct

Inspector

USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICEAPPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION

1. ZONE NO AND LOCATION (Address)

FOREIGN TRADE ZONE No. 2
NAPOLEON AVENUE WHARF
NEW ORLEANS, LA.

2. DISTRICT/PORT CODE

20 - 02 NEW ORLEANS, LA.

19 CFR 146.22, 146.32, 146.35-146.37, 146.39-146.41, 146.44, 146.53, 146.66

3. IMPORTING VESSEL (& FLAG)/OTHER CARRIER

(MX) M/V NUEVO LEON V.30W

4. EXPORT DATE

5/17/97

5. IMPORT DATE

6/7/97

6. ZONE ADMISSION NO

23971

7. U.S. PORT OF UNLADING

NEW ORLEANS, LA.

8. FOREIGN PORT OF LADING

LE HAVRE

9. BILL OF LADING/AWB NO.

TEMULHNLN30W0628

10. INWARD M'FEST NO.

N/A

11. INBOND CARRIER

N/A

12. I.T. NO AND DATE

N/A

13. I.T. FROM (Port)

N/A

14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT?

☐ YES☐ NO

15. NO. OF PACKAGES AND COUNTRY OF ORIGIN	16. DESCRIPTION OF MERCHANDISE	17. HTSUS NO	18. QUANTITY (HTSUS)	19. GROSS WEIGHT	20. SEPARATE VALUE & AGGR CHGS
7 C/O FR	(20') TANK CONTAINERS: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II EMERGENCY TELEPHONE: (800) 424-9390	2929.10.3000	132200 KG	159760 KG	\$694,050.CIF \$10,150.NDC \$683,900.FOB
21. HARBOR MAINTENANCE FEE (19 CFR 24.24) <input checked="" type="checkbox"/>					\$854.88

22. I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations.

23. I hereby apply for the status designation indicated:

☒ NONPRIVILEGED FOREIGN
(19 CFR 146.42)☐ PRIVILEGED FOREIGN
(19 CFR 146.41)☐ ZONE RESTRICTED
(19 CFR 146.44)☐ DOMESTIC
(19 CFR 146.43)

24. APPLICANT FIRM NAME

CEDAR CHEMICAL CORPORATION

25. BY (Signature)

PHILIPIN, CAZALAS & ST. JOHN INC. Atty in fact

26. TITLE

INSP

27. DATE

6/10/97

F.T.Z. AGREES TO RECEIVE
MERCHANDISE INTO THE ZONE ☒

28. FOR THE F.T.Z. OPERATOR (Signature)

THOMAS P. O'CONNELL

29. TITLE

INSP

30. DATE

6/11/97

PERMIT

Permission is hereby granted to
transfer the above merchandise
into the Zone.

31. DISTRICT DIRECTOR OF CUSTOMS BY (Signature)

INSP

32. TITLE

INSP

33. DATE

6/11/97

PERMIT

The above merchandise has been
granted the requested status.

34. DISTRICT DIRECTOR OF CUSTOMS BY (Signature)

INSP

35. TITLE

INSP

36. DATE

6/11/97

37. The goods described herein are authorized to be transferred.

☒ without exception☐ except as noted below

PERMIT

TO

TRANSFER

38. CUSTOMS OFFICER AT STATION (Signature)

THOMAS P. O'CONNELL

39. TITLE

GULF STATES CARTAGE

40. STATION

CHL #187

41. DATE

6/10/97

42. RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)

THOMAS P. O'CONNELL

43. CARTMAN

GULF STATES CARTAGE

44. CHL NO

CHL #187

45. DATE

6/10/97

46. To the District Director of Customs: The above merchandise was received at the Zone on the date shown except as noted below.

CCRN 1970 77-6 FR2076 SIDE SIDE DENT

AUDIT INSPECTOR FTZ #2

W. H. B. SAT

47. FOR THE FTZ OPERATOR (Signature)

W. H. B. SAT

48. TITLE

W. H. B. SAT

49. DATE

6-13-97

(Paperwork Reduction Act Notice on Reverse)

Customs Form 274 (02/99)

RHONE-POULENC AGRO

14-20, RUE PIERRE BAIZET B P 9163
69263 LYON CEDEX 09 - FRANCE
TEL 04 72 85 25 25 - FAX 04 72 85 27 89
TLX 310 088 F RHONE
N° IDENTIFICATION TVA FR 63 989 503 309

INVOICE NO: 201204 / DATED: 23.05.1997
SINCE: 1.05.1997

CONSIGNEE: UNICOM
LEONAR CHEMICAL CORPORATION
ATTN: BOB CHRISTIAN
HWY 242 SOUTH
AK 72090 WEST HELENA
UNITED STATES

INVOICE: UNICOM
LEONAR CHEMICAL CORPORATION
ATTN: BOB CHRISTIAN
HWY 242 SOUTH
AK 72090 WEST HELENA
UNITED STATES

DATE: 23.05.1997
TIME: 14.00
SHIPMENT BY: AIR
TERMS OF DELIVERY: EXW
TERMS OF PAYMENT: 100% ADVANCE
PAYMENT DATE: 23.05.1997
PAYMENT MODE: TELEGRAPHIC TRANSFER
CURRENCY: USD

100% ADVANCE

QUANTITY: 1000
UNIT PRICE: 1.00
TOTAL: 1000.00
AMOUNT: 1000.00

1000.00

REMARKS: 1000.00
1000.00
1000.00
1000.00
1000.00

TOTAL: 1000.00

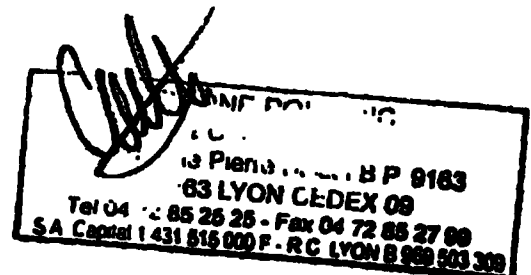
1000.00

EXEMPTION FROM PAYMENT: 1000.00

1000.00

1000.00

1000.00



RHONE-POULENC AGRO

14-20, RUE PIERRE BAIZET B.P. 9163
69263 LYON CEDEX 09 - FRANCE
TÉL. 04 72 85 25 25 - FAX 04 72 85 27 99
TLX 310 088 F RHÔNE
N° IDENTIFICATION TVA FR 53 969 503 309

INVOICE NO: 60115118 DATED 27.05.1997
STAT : 035 01/91

ORIGINAL

CONSIGNEE: USCEDAR
CEDAR CHEMICAL CORPORATION
ATTN : 808 CHRISTIAN
HWY 242 SOUTH
AR 72390 WEST HELENA
UNITED STATES

INVOICEE: USCEDAR
CEDAR CHEMICAL CORPORATION
ATTN : 808 CHRISTIAN
P.O. BOX BOX 2749
AR 72390 WEST HELENA
UNITED STATES

O/REF : 01 40127462/0010
Y/REF : 04056577
SHIPPING BY :
TERMS OF DELIVERY : CIF - COST INS FREIG
TERMS OF PAYMENT : 90 DAYS INVOICE DATE
PAYMENT DATE : 25.08.1997
PAYMENT MODE : TELEGRAPHIC TRANSFER
CURRENCY : USD

EOC : NEW ORLEANS

PRODUCT CODE : 18576XCIT
JUST.MATERIAL NO : 3.4 DCPI CITERNE
QUANTITY : 39000.00 KG
UNIT PRICE : 5.25 USD PER 1 KG
AMOUNT : 204.750.00 USD

SH N° : 29291090

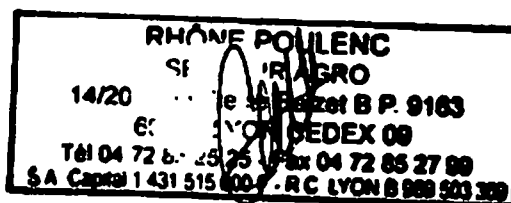
MARKING
RHONE-POULENC AGRO
3.4-DCPI
CEDAR / USA
N.W.....
G.W.....
NR.....

TOTAL TO BE PAID

204.750.00 USD

EXONERATION TVA ART. 262TER I DU CODE GENERAL DES IMPOTS

TELEGRAPHIC TRANSFER OR SWIFT TO SOCIETE GENERALE LYON GRANDES
ENTREPRISES : ACCOUNT NUMBER 780109828
TRA SWIFT : SWIFT CODE FFPYLYE LYON ENTREPRISES 02280



RAW MATERIAL RECEIVING RECORD N^o 10091

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

10:00

RECEIVED BY

M. A. Sullivan

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

7-11-97

0110531

LOGU9431573

Net 42108

SHIPPER

Rhone & Sons

CARRIER

Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit #2	40150	DCP1

COMMENTS

Lab Has C.O.A.

SECTION 2

RECIPIENT

TIME SAMPLE/CERTIFICATE TAKEN TO LAB

Donde Frank

10:00

UNLOADED AT (tank number, unit, warehouse, etc.)

Unit #2A

COMMENTS

NA

SECTION 3

LAB TECHNICIAN

ACCEPT

REJECT

REASON FOR REJECTION

JH

✓

COMMENTS

SECTION 4

SHIFT SUPERVISOR

ACCEPT

REJECT

REASON FOR REJECTION

J. J. Jones

✓

PLANT WEIGHT

UNLOADING TIMES

NET 42180

START TIME

11:00

END TIME

1020 7/25/97

COMMENTS

Drop 1/2 Container on 10:55

WEIGHED ON A FAIRBANKS SCALE

DATE 7/11/97

CUSTOMERS NAME Cedar chemical

L080943157.3

ADDRESS Hwy 242

COMMODITY DCP

CARRIER Triple E TRACTOR + Load ISO

REMARKS

75860 10:00AM JL 11 97 full S/C 7 tractor
17160 Tractor only

LBS. GROSS

LBS. TARE - DRIVER ON _____ OFF ☒

LBS. NET @ _____ PER LB. PRICE _____

SHIPPER _____

WEIGHER _____

58700
16520
42180 NET WT

FAIRBANKS SCALE CAT. 083905

CENSUS USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICEAPPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION

19 CFR 146.22, 146.32, 146.35-146.37, 146.39-146.41, 146.44, 146.53, 146.66

1. ZONE NO. AND LOCATION (Address)

CEDAR CHEMICAL CORPORATION
FTZ 14B
HIGHWAY 242 SOUTH
WEST HELENA, ARKANSAS 72390

2. DISTRICT/PORT CODE

2006 MEMPHIS, TENNESSEE

3. IMPORTING VESSEL (& FLAG)/OTHER CARRIER

(MX) M/V NUEVO LEON V.30W

4. EXPORT DATE

5/17/97

5. IMPORT DATE

6/7/97

6. ZONE ADMISSION NO.

19970711-10

7. U.S. PORT OF UNLADING

NEW ORLEANS, LA.

8. FOREIGN PORT OF LADING

LE HAVRE

9. BILL OF LADING/AWB NO.

TEMULHNLN30W0628

10. INWARD M'FEST NO

N/A

11. INBOND CARRIER

TRIPLE E TRANSPORT

12. I.T. NO. AND DATE

#313,963,694

7/9/97

13. I.T. FROM (Port)

NEW ORLEANS, LA.

14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT?

☐ YES☐ NO

15. NO. OF PACKAGES AND COUNTRY OF ORIGIN	16. DESCRIPTION OF MERCHANDISE	17. HTSUS NO	18. QUANTITY (HTSUS)	19. GROSS WEIGHT	20. SEPARATE VALUE & AGGR CHGS.
1 C/O FR	(20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II EMERGENCY TELEPHONE (800) 424-9390 CONTAINER NUMBER LOGU-943157-3 ZONE-TO-ZONE TRANSFER NPF FROM FTZ #2 TO FTZ #14B FTZ #2 ADMISSION No. 23971	2929.10.3000	19100 KG	22800 KG	\$100275. CIF \$1467. NDC \$98808. FOB
21. HARBOR MAINTENANCE FEE (19 CFR 24.24)					

22. I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations.

23. I hereby apply for the status designation indicated:

☒ NONPRIVILEGED FOREIGN
(19 CFR 146.42)☐ PRIVILEGED FOREIGN
(19 CFR 146.41)☐ ZONE RESTRICTED
(19 CFR 146.44)☐ DOMESTIC
(19 CFR 146.43)

24. APPLICANT FIRM NAME

CEDAR CHEMICAL CORPORATION

25. BY (Signature)

26. TITLE

27. DATE

F.T.Z. AGREES TO RECEIVE
MERCHANDISE INTO THE ZONE

28. FOR THE F.T.Z. OPERATOR (Signature)

29. TITLE

30. DATE

PERMIT Permission is hereby granted to
transfer the above merchandise
into the Zone.

31. DISTRICT DIRECTOR OF CUSTOMS BY (Signature)

32. TITLE

33. DATE

PERMIT The above merchandise has been
granted the requested status.

34. DISTRICT DIRECTOR OF CUSTOMS BY (Signature)

35. TITLE

36. DATE

37. The goods described herein are authorized to be transferred

☐ without exception☐ except as noted belowPERMIT
TO
TRANSFER

38. CUSTOMS OFFICER AT STATION (Signature)

39. TITLE

40. STATION

41. DATE

42. RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)

43. CARTMAN

44. CHL NO

45. DATE

FTZ
OPERATOR'S
REPORT OF
MERCHANDISE
RECEIVED
AT ZONE

46. To the District Director of Customs: The above merchandise was received at the Zone on the date shown except as noted below:

47. FOR THE FTZ OPERATOR (Signature)

48. TITLE

49. DATE

TRANSPORTATION INLAND MANIFEST OF GOODS SUBJECT TO CUSTOMS INSPECTION AND PERMIT

UNITED STATES CUSTOMS SERVICE

Port **NEW ORLEANS, LA.** Date **6/11/97**

Dist. No. **20** Port **NEW ORLEANS, LA.** Code No. **02** First U.S. Port of Unloading **NEW ORLEANS, LA.**

Port of **NEW ORLEANS, LA.** Date **7/2/97**

Entered or imported by **CEMAR CHEMICAL CORPORATION** to be shipped in bond via **TRIPLE E TRANSPORT** consigned to District Director of Customs At **2006 MEMPHIS, TN**

Final foreign destination **KELOK, ON DISCHARGE**

Consignee **CEMAR CHEMICAL CORP**

Foreign port of lading **LE HAVRE** B/L No. **1000000000** Date of sailing **6/10/97**

Imported on the **NAVY NEWS LINE V. 300** Flag **UK** on **6/10/97** via **PORT**

Exported from **FRANCE** on **6/12/97** Goods now at **PORTLAND TRUCK RENT CO.**

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
L888-003157-3	1 (20') TANK CONTAINER: 3,4-DICHLOROPHTHALISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.S. II SECURITY SHEET: 6.1 - 04 N.S.A.S. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 NTS 2329.10.3000 C/O FR WFOE PRIMOGR1420LYO 20' TO-ZONE TRANSFER - NY FROM FTZ #2 TO FTZ #14B FTZ #2 ADMISSION #23071	60205	100275	EST. NOT VERIFIED	

FTZ 14B
DIRECT DELIVERY PROGRAM
7-11-97
Bob Chish
SIGNATURE

GO. No.

CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND AND/OR LADING FOR EXPORTATION FOR

2006 MEMPHIS, TENNESSEE

WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN DESCRIBED GOODS WERE:

Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals

Laden on the— (Vessel, vehicle, or aircraft)

which cleared for—

on (Date)

as verified by export records.

(Inspector or warehouse officer)

(Inspector)

(Date)

I truly declare that the statements contained herein are true and correct to the best of my knowledge and belief.

Entered or withdrawn by **CEMAR CHEMICAL CORPORATION**
By PHILIP, CARLOS & ST. JOHN, INC.
Atty in fact

To the Inspector or Warehouse Officer: The above-described goods shall be disposed of as provided herein.

For the District Director of Customs.

Received from the District Director of Customs of above base of the merchandise described in this manifest for transportation and delivery into the custody of the customs officer at the port named above, all packages in apparent good order except as noted hereon.

[Signature]
Attorney of Agent of Carrier

INSTRUCTIONS

Consult customs officer or Part 18, Customs Regulations, for the appropriate number of copies required for entry, withdrawal, or manifest purposes.

For the purpose of transfer under the cartage or lighterage provisions of a proper bond to the place of shipment from the port of entry, extra copies bearing a stamp or notation as to their intended use may be required for local administration.

As the form is the same whether used as an entry or withdrawal or manifest, all copies may be prepared at the same time by carbon process, unless more than one vessel or vehicle is used, in which case a separate set of manifest must be prepared for each such vessel or vehicle.

Whenever this form is used as an entry or withdrawal, care should be taken that the kind of entry is plainly shown in the block in the upper right-hand corner of the face of the entry.

This form may be printed by private parties provided that the supply printed conforms to the official form in size, wording, arrangement, and quality and color of paper and ink. For sale by District Directors of Customs.

RECORD OF CARTAGE OR LIGHTERAGE

Delivered to Cartman or Lighterman in apparent good condition except as noted on this form

CONVEYANCE	QUANTITY	DATE	DELIVERED	RECEIVED	RECEIVED
200100312	1000	7/10/77	<i>[Signature]</i> (Inspector or Warehouse Officer)	<i>[Signature]</i> (Cartman or Lighterman)	7/11/77 (Date) (Inspector)
			(Inspector or Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
			(Inspector or Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
Total			(Warehouse proprietor)		

CERTIFICATES OF TRANSFER. (If required)

I certify that within - described goods were transferred by reason of _____ to _____ on _____ at _____ and sealed with _____ or seals Nos. _____ and that goods were in same apparent condition as noted on original lading except _____

I certify that within - described goods were transferred by reason of _____ to _____ on _____ at _____ and sealed with _____ or seals Nos. _____ and that goods were in same apparent condition as noted on original lading except _____

INSPECTED

at _____ on _____ (Date) and seals found _____

If transfer occurs within city limits of a customs port or station, customs officers must be notified to supervise transfer.

INSPECTOR'S REPORT OF DISCHARGE AT DESTINATION

Port _____ Station _____ (Date) _____
 TO THE DISTRICT DIRECTOR OF CUSTOMS Delivering line _____ Car No. _____ Initial _____
 Arrived _____ Condition of car _____ of seals _____ of packages _____

Date of Delivery to Importer, or Gen Order	PACKAGES	No and Kind of Entry or General Order	Bonded Truck or Lighter No.	CONDITIONS, ETC.
7/15/77	5000	7000	7000	1.1 (ET)

certify above report is correct.

INSPECTION AND INSPECTION

Inspector

REF: 973268

19 CFR 10.80, 10.81, 18, 123.41, 123.42

TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT

UNITED STATES CUSTOMS SERVICE

403

Form Approved
OMB No. 1515-0005

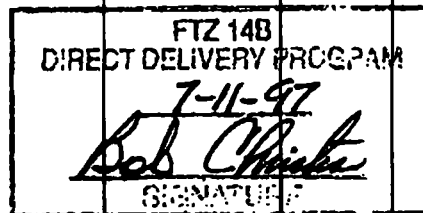
FTZ Entry No. 23971
Port NEW ORLEANS, LA.
Date 6/11/97

Entry No. 313,963,694
Class of Entry I.T. (61) (I.T.)(Wd.T.)(Wd.Ex.)(T.E.)(Drawback, etc.)

Dist. No. **20** Port Code No. **02** First U.S. Port of Unlading **NEW ORLEANS, LA.**
 Port of **NEW ORLEANS, LA.** Date **7/9/97**

Entered or imported by **CEDAR CHEMICAL CORPORATION** to be shipped
 in bond via **TRIPLE E TRANSPORT** BOND No. **209100312** consigned to
 (CHL Number) (Vessel or carrier) (Car number and initial) (Pier or station)
 District Director of Customs At **2006 MEMPHIS, TN** Final foreign destination
 Consignee **CEDAR CHEMICAL CORP. FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, ARKANSAS 72390**
 (At customs port of exit or destination) (For exportations only)
 Foreign port of lading **LE HAYRE** B/L No. **TEPHILHLN30ND628** Date of sailing **5/17/97**
 (Above information to be furnished only when merchandise is imported by vessel)
 Imported on the **M/Y HUEYO LEON V. 30N** Flag **MX** on **6/7/97** via **DIRECT**
 (Name of vessel or carrier and motive power) (Date imported) (Last foreign port)
 Exported from **FRANCE** on **5/17/97** Goods now at **FOREIGN TRADE ZONE No. 2**
 (Country) (Date) (Name of warehouse, station, pier, etc.)

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
LOGU-943157-3	1 (20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSIS 2929.10.3000 C/O FR NFE3 FRH0AGRI420LYO ZONE-TO-ZONE TRANSFER NPF FROM FTZ #2 TO FTZ #14B FTZ #2 ADMISSION #23971	50265	100275	EST. NOT VERIFIED	



G.O. No.		I truly declare that the statements contained herein are true and correct to the best of my knowledge and belief.	
CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND AND/OR LADING FOR EXPORTATION FOR 2006 MEMPHIS, TENNESSEE (Port)		Entered or withdrawn by CEDAR CHEMICAL CORPORATION by PHILBIN, CAZALAS & ST. JOHN, INC. Atty in fact <i>[Signature]</i>	
WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN- DESCRIBED GOODS WERE: Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals Nos. or the packages (were) (were not) labeled, or corded and sealed. (Inspector or warehouse officer)		To the Inspector or Warehouse Officer: The above-described goods shall be disposed of as specified herein. For the District Director of Customs. Received from the District Director of Customs of above district the merchandise described in this manifest for transportation and delivery into the custody of the customs officers at the port named above, all packages in apparent good order except as noted hereon. TRIPLE E TRANSPORT <i>[Signature]</i> Attorney or Agent of Carrier	
Laden on the— (Vessel, vehicle, or aircraft) which cleared for— on (Date) as verified by export records (Inspector) (Date)			

Consult customs officer or Part 18 Customs Regulations for the appropriate number of copies required for entry, withdrawal, or manifest purposes.

For the purpose of transfer under the cartage or lighterage provisions of a proper bond to the place of shipment from the port of entry, extra copies bearing a stamp or notation as to their intended use may be required for local administration.

As the form is the same whether used as an entry or withdrawal or manifest, all copies may be prepared at the same time by carbon process, unless more than one vessel or vehicle is used in which case a separate set of manifest must be prepared for each such vessel or vehicle.

Whenever this form is used as an entry or withdrawal, care should be taken that the kind of entry is plainly shown in the block in the upper right-hand corner of the face of the entry.

This form may be printed by private parties provided that the supply printed conforms to the official form in size, wording, arrangement, and quality and color of paper and ink. For sale by District Directors of Customs.

RECORD OF CARTAGE OR LIGHTERAGE

Delivered to Cartman or Lighterman in apparent good condition except as noted on this form.

CONVAYANCE	QUANTITY	DATE	DELIVERED	RECEIVED	RECEIVED
			(Inspector or Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
			(Inspector or Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
			(Inspector or Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
Total			(Warehouse proprietor)		

CERTIFICATES OF TRANSFER. (If required)

I certify that within - described goods were transferred	I certify that within - described goods were transferred	INSPECTED
by reason of	by reason of	at
to	to	on
on	on	(Date)
and sealed with	and sealed with	and seals found
Nos. and that	Nos. and that	.....
goods were in same apparent condition as noted on	goods were in same apparent condition as noted on	.....
original lading except	original lading except .....	.....
.....	.....	Inspector
(Inspector or Warehouse Officer)	(Inspector or Warehouse Officer)	

If transfer occurs within city limits of a customs port or station, customs officers must be notified to supervise transfer.

INSPECTOR'S REPORT OF DISCHARGE AT DESTINATION

Port Station (Date)

TO THE DISTRICT DIRECTOR OF CUSTOMS Delivering line Car No. Initial
Arrived Condition of car of seals of packages

Date of Delivery to Depositor of Goods	PACKAGES	Number Kept for Entry or Other Purpose	Balance of Goods Entered No.	CONTINUOUS ETC.

I certify above report is correct

Inspector

TOLOCHIMIE

ADRESSER VOTRE CORRESPONDANCE A :

TOLOCHIMIE - Impasse PALAYRÉ
B.P. 1196 - 31037 TOULOUSE CEDEX 1
TÉL. 05 61 31 78 78
TÉLÉCOPIE : 05 61 31 78 50

N / REF : MF / ML

DATE 13-Mai-97

CEDAR

COMMANDE
EXPEDITION

N° 210127462
N° 221
DU 13 Mai 97

CAMION CITERNE
CONTAINER
WAGON

N°
N° dogu 943 157-3
N°

N° DE LOT DU PRODUIT

B303A/13.5.97.5

N° DE LOT DU CONDITIONNEMENT

(s' il y a lieu)

CERTIFICAT D'ANALYSE DU 3,4-DICHLOROPHENYLISOCYANATE

Nous certifions que le produit ci-dessus a la composition suivante :

M E T H O D E	Détermination	Valeur	Unité	Spécification	Méthode d'analyse Tolochimie
1	aspect	conforme		solide blanc	Visuelle
2	3,4-dichlorophénylisocyanate	99.64	%	> 98.5	To 10.27.88
2	2,3-dichlorophénylisocyanate	0.25	%	pour information	To 10.27.88
2	3-chloro + 4-chlorophénylisocyanate	0	%	pour information	To 10.27.88
2	monochlorobenzène	0	%	< 0.2	To 10.27.88
2	semi-lourds	0.03	%	< 0.8	To 10.27.88
autre	Isocyanate de chlorotolyle	0.08	%		
autre			%		

principe de la méthode:

1	visuelle
2	C.P.G
autre	
autre	

LE RESPONSABLE DU CONTROLE ANALYTIQUE

AB0000018659

REF 97268

1031, 18, 123.41, 123.42

TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT

UNITED STATES CUSTOMS SERVICE

403

Form Approved
OMB No. 1515-0047Entry No. **313, 863, 189**Class of Entry **I.T. (61)**
(LT)(WLT)(WLE)(XTE)(Drawing)(R)Entry No. **23971**Port **NEW ORLEANS, LA.**Date **6/11/97**Dist. No. **20** Port Code No. **02** First U.S. Port of Unloading **NEW ORLEANS, LA.**Port of **NEW ORLEANS, LA.** Date **7/9/97**Entered or imported by **CEDAR CHEMICAL CORPORATION** to be shippedIn bond via **TRIPLE E TRANSPORT** Bond No. **209100312** consigned toDistrict Director of Customs At **2006 MEMPHIS, TN** Final foreign destination (For exportations only)Consignee **CEDAR CHEMICAL CORP.** FTZ **14B** HIGHWAY **242 SOUTH WEST HELENA, ARKANSAS 72390**
(At customs port of call or destination)Foreign port of lading **LE HAYRE** B/L No. **TEMILJHLN3QW0628** Date of sailing **5/17/97**
(Above information to be furnished only when merchandise is imported by vessel)Imported on the **M/V NUEVO LEON V. 30W** Flag **MX** on **6/7/97** via **DIRECT**
(Name of vessel or carrier and motive power) (Date imported) (Last foreign port)Exported from **FRANCE** on **5/17/97** Goods now at **FOREIGN TRADE ZONE No. 2**
(Country) (Date) (Name of warehouse, station, pier, etc.)

Marks and Numbers Repeat of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
LOUN-943157-3	1 (20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSUS 2929.10.3000 C/O FR MFGS FRRHQAGR1420LYO ZONE-TO-ZONE TRANSFER NPF FROM FTZ #2 TO FTZ #14B FTZ #2 ADMISSION #23971	50265	100275	EST. NOT VERIFIED	

G.O. No.

CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND
AND/OR LADING FOR EXPORTATION FOR**2006 MEMPHIS, TENNESSEE**WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-
DESCRIBED GOODS WERE:Delivered to the Carrier
named above, for delivery to
the District Director of
Customs at destination sealed
with Customs seals

Laden on the—

(Vessel, vehicle, or aircraft)

which cleared for—

on

(Date)

as verified by export records.

(Inspector)

(Date)

I truly declare that the statements contained herein are true and
correct to the best of my knowledge and belief.Entered or withdrawn by
CEDAR CHEMICAL CORPORATION
by **PHILBIN, CAZALAS & ST. JOHN, INC.**
Atty. in factTo the Inspector or Warehouse Officer: The above-described
goods shall be disposed of as specified herein.

For the District Director of Customs.

Received from the District Director of Customs of above District the
merchandise described in this manifest for transportation and delivery
into the custody of the customs officers at the port named above,
all packages in apparent good order except as noted hereon.**TRIPLE E TRANSPORT**Attorney or Agent of Carrier
AB0000018659



July 16, 1997

Mr. Bob Christian
Manager, Purchasing
Cedar Chemical Corporation
Post Office Box 2749
West Helena, Arkansas 72390

Dear Mr. Christian:

In accordance with Customs regulations pertaining to the responsibilities of the operator of the transferring zone, we are transmitting to the receiving subzone (FTZ 14B) the enclosed copies of the original custom forms 214 and 7512 as well as the shipping invoice.

The aforementioned documents which are enclosed, relate to the zone transfer of tank containers LOGU 943157-3 and SNIU 121003-2 covered by FTZ #2's zone lot number 23971 and I.T. numbers 313963694 and 313963720 respectively.

Sincerely,

Baldwin van Benthuyzen
Manager
Foreign Trade Zone #2

BVB:nr

Enclosures

RHONE-POULENC AGRO

14-20, RUE PIERRE BAIZET B P 9183
69263 LYON CEDEX 08 - FRANCE
TEL 04 72 85 25 25 - FAX 04 72 85 27 99
TLX 310 088 F RHONE
N° IDENTIFICATION TVA FR 53 969 503 309

ORIGINAL

INVOICE NO: 20115118 DATED: 27.05.1997
DATE: 27.05.1997

CONSIGNEE: C. CHEMICAL
CEDAR CHEMICAL CORPORATION
ATTN: BOB CHRISTIAN
HWY 24, SOUTH
AR 72390 WEST HELENA
UNITED STATES

INVOICEE: C. CHEMICAL
CEDAR CHEMICAL CORPORATION
ATTN: BOB CHRISTIAN
P.O. BOX 807 2749
AR 72390 WEST HELENA
UNITED STATES

.....
D/PAY : 01 40127452 0010
D/REP : 4052517
SHIPPING BY :
TERMS OF DELIVERY : CIF LUSI INS FREIG EOL : NEW ORLEANS
TERMS OF PAYMENT : 90 DAYS INVOICE DATE
PAYMENT DATE : 15.05.1997
PAYMENT MODE : TELEGRAPHIC TRANSFER
CURRENCY : USD

.....
PRODUCT CODE : 15585011 SH N° : 29291090
CUSTOMERIAL NO : 314 0111 C/REP 2
QUANTITY : 39000.00 kg
UNIT PRICE : 5.23 USD PER 1 kg
TOTAL : 204.750.00 USD

.....
AGRO : RHONE-POULENC AGRO
AGRO :
AGRO :
AGRO :
AGRO :
AGRO :

TOTAL TO BE PAID 204.750.00 USD

STOPERATION TVA ART. 262TER 1 DU CODE GENERAL DES IMPOTS

TELEGRAPHIC ADDRESS OF SWIFT TO SOCIETE GENERALE LYON BRANDES
ENTREPRISES : ACCOUNT NUMBER 20104829
SWIFT : SWIFT CODE FRFP33 LYON ENTREPRISES 02260

RHONE-POULENC
SF
14/20
e 14/20 B P. 9183
6: LYON CEDEX 08
TEL 04 72 85 25 25 - FAX 04 72 85 27 99
SA Capital 1 431 515 000 - RC LYON 8 969 503 309

RAW MATERIAL RECEIVING RECORD

No. 10109

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0830

RECEIVED BY

M. Sullivan

SECTION 1

DATE	ORDER NO.	CAR ON TRUCK NO.	DECLARED WEIGHT
7-16-97	n/a	SN10121003-2	Net n/a 41557

SHIPPER

Hilco, Hilco

CARRIER

Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit #2	40150	DCP1

COMMENTS

Lab Has C.O.A.

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
<i>T. Nichols</i>	<i>0840</i>

UNLOADED AT (tank number, unit, warehouse, etc.)

Dept. PAD

COMMENTS

SECTION 3

DATE	UNLOAD	ACCEPT	REJECT	REASON FOR REJECTION
<i>TLP</i>	<i>X</i>			

COMMENTS

SECTION 4

DATE	UNLOAD	ACCEPT	REJECT	REASON FOR REJECTION
<i>7/16/97</i>	<i>X</i>			

PLANT WEIGHT

41.660

UNLOADING TIMES

START TIME

END TIME

COMMENTS

Trailer was loaded with used as needed

WEIGHED ON A FAIRBANKS SCALE

DATE

7/16/97

CUSTOMERS NAME

Cedon

ADDRESS

W. Helms Ash

COMMODITY

OCP

CARRIER

TRIPLE E

REMARKS

SN 14-121003-2

73860

08:26AM JL 16 97

56640
14980

LBS. GROSS

LBS. TARE - DRIVER ON OFF ☒

17220

08:33AM JL 16 97

41660

LBS. NET @ PER LB. PRICE

56640 fuel cost only

SHIPPER

WEIGHER

FAIRBANKS SCALE CAT. 083905

WEIGHED ON A FAIRBANKS SCALE

DATE

7/30/97

CUSTOMERS NAME

Cedon Chemical

ADDRESS

25 Hwy 242 South

COMMODITY

OCP

CARRIER

REMARKS

32280

02:40PM JL 30 97

LBS. GROSS

LBS. TARE - DRIVER ON OFF

17300

02:29PM JL 30 97

LBS. NET @ PER LB. PRICE

14980

SHIPPER

WEIGHER

FAIRBANKS SCALE CAT. 083905

REF: 973273

19 CFR 10.60, 10.61, 18, 123.41, 123.42

TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMITForm Approved
OMB No. 1515-0005

402

FTZ Entry No. 23971

Port NEW ORLEANS, LA.

Date 6/11/97

UNITED STATES CUSTOMS SERVICE

Dist. No. 20 Port Code No. 02 First U.S. Port of Unloading NEW ORLEANS, LA.

Port of NEW ORLEANS, LA.

Date 7/14/97

Entry No. 313,943,720

Class of Entry I.T. (61)
(LT)(Wd.T.)(Wd.Ex.)(T.E.)(Drawback, etc.)

Entered or imported by CEDAR CHEMICAL CORPORATION to be shipped

in bond via TRIPLE E TRANSPORT BOND No. 209100312 consigned to

District Director of Customs At 2006 MEMPHIS, TN Final foreign destination (For exportations only)

Consignee CEDAR CHEMICAL CORP. FTZ 14B HIGHWAY 242 SOUTH WEST MELENA, ARKANSAS 72390

Foreign port of lading LE HAVRE B/L No. TEBLHLE130ND628 Date of sailing 5/17/97

Imported on the N/Y NUEVO LEON V. 30N Flag MX on 6/7/97 via DIRECT

Exported from FRANCE on 5/17/97 Goods now at FOREIGN TRADE ZONE No. 2

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
NTU-121003-2	1 (20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 NTSUS 2929.10.3000 C/O FR NPG: FRMAGRI420LYO ZONE-TO-ZONE TRANSFER NPF FROM FTZ #2 TO FTZ #14B FTZ #2 ADMISSION #23971	48523	98962	EST. NOT VERIFIED	

 FTZ 14B
 DIRECT DELIVERY PROGRAM
 7-16-97
 Bob Chilton
 SIGNATURE

G.O. No.

CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND
AND/OR LADING FOR EXPORTATION FOR

2006 MEMPHIS, TENNESSEE

WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-
DESCRIBED GOODS WERE:Delivered to the Carrier
named above, for delivery to
the District Director of
Customs at destination sealed
with Customs sealsNos. _____
or the packages (were) (were
not) labeled, or corded and
sealed.

(Inspector or warehouse officer)

(Date)

Laden on the—

(Vessel, vehicle or aircraft)

which cleared for—

on _____
(Date)

as verified by export records.

(Inspector)

(Date)

I truly declare that the statements contained herein are true and
correct to the best of my knowledge and beliefEntered or withdrawn by _____
CEDAR CHEMICAL CORPORATION
by PHILBIN, CAZALAS & ST. JOHN, INC.
Atty in factTo the Inspector or Warehouse Officer, the above-described
goods shall be disposed of as specified hereinReceived from the District Director of Customs of above district the
merchandise described in this manifest for transportation and delivery
into the custody of the customs officers at the port named above.
all packages in apparent good order except as noted hereon.

TRIPLE E TRANSPORT

Attorney or Agent of Carrier

Customs Form 7512 (040984)

AB0000018675

REF: 973273

19 CFR 10.60, 10.81, 18, 123.41, 123.42

TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT

UNITED STATES CUSTOMS SERVICE

Form Approved
OMB No 1515-0005

403

FTZ Entry No. 23971

Port NEW ORLEANS, LA.

Date 6/11/97

Dist. No. 20

Port Code No. 02

First U.S. Port of Unlading

NEW ORLEANS, LA.

Port of NEW ORLEANS, LA.

Date 7/14/97

Entry No. 313,963,720

Class of Entry I.T. (61)
(I.T.)(Wd.T.)(Wd.Ex.)(T.E.)(Drawback, etc.)

Entered or imported by CEDAR CHEMICAL CORPORATION to be shipped

in bond via TRIPLE E TRANSPORT BOND No. 209100312 consigned to

District Director of Customs At 2006 MEMPHIS, TN Final foreign destination (for exportations only)

Consignee CEDAR CHEMICAL CORP. FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, ARKANSAS 72390

Foreign port of lading LE HAYRE B/L No. TEMAHLK30MD628 Date of sailing 5/17/97

Imported on the N/Y NUEVO LEON V. 30M Flag MX on 6/7/97 via DIRECT

Exported from FRANCE on 5/17/97 Goods now at FOREIGN TRADE ZONE No. 2

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
SNIU-121003-2	1 (20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSUS 2929.10.3000 C/O FR NFG: FRH0AGRI420LY0 ZONE-TO-ZONE TRANSFER NPF FROM FTZ #2 TO FTZ #14B FTZ #2 ADMISSION #23971	48523	98962	EST. NOT VERIFIED	

FTZ 14B
DIRECT DELIVERY PROGRAM
7-16-97
Bob Chilton
SIGNATURE

G.O. No.

CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND
AND/OR LADING FOR EXPORTATION FOR

2006 MEMPHIS, TENNESSEE

WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-
DESCRIBED GOODS WERE:Delivered to the Carrier
named above, for delivery to
the District Director of
Customs at destination sealed
with Customs sealsNos
or the packages (were) (were
not) labeled, or corded and
sealed.

(Inspector or warehouse officer)

(Date)

Laden on the—

(Vessel, vehicle, or aircraft)

which cleared for—

on
(Date)

as verified by export records.

(Inspector)

(Date)

I truly declare that the statements contained herein are true and
correct to the best of my knowledge and belief

Entered or withdrawn by

CEDAR CHEMICAL CORPORATION

by PHILBIN, CAZALAS & ST. JOHN, INC.

Atty in fact

To the Inspector or Warehouse Officer, the above-described
goods shall be disposed of as specified herein.

For the District Director of Customs.

Received from the District Director of Customs of above district the
merchandise described in this manifest for transportation and delivery
into the custody of the customs officers at the port named above.
all packages in apparent good order except as noted hereon

TRIPLE E TRANSPORT

Attorney or Agent of Carrier

Customs Form 7512 (040984)

AB0000018675

UNITED STATES CUSTOMS SERVICE

Entry No. 313,900-700
Class of Entry I.T. (61)
(LT.) (W.T.) (WdEx.) (T.E.) (HdWdEx.) (E.)

Port of NEW ORLEANS, LA. Date 7/14/97

Entered or imported by **CEDAR CHEMICAL CORPORATION** to be shipped
in bond via **TRIPLE E TRANSPORT** BOND No. **209100312** consigned to
(CHL Number) (Vessel or carrier) (Car number and initial) (Pier or station)
District Director of Customs At **2006 MEMPHIS, TN** Final foreign destination
(For exportations only)
Consignee **CEDAR CHEMICAL CORP. FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, ARKANSAS 72390**
(At customs port of exit or destination)
Foreign port of lading **LE HAYRE** B/L No. **TENUJHLN30W0628** Date of sailing **5/17/97**
(Above information to be furnished only when merchandise is imported by vessel)
Imported on the **M/Y NUEVO LEON V. 30M** Flag **MX** on **6/7/97** via **DIRECT**
(Name of vessel or carrier and motive power) (Date imported) (Last foreign port)
Exported from **FRANCE** on **5/17/97** Goods now at **FOREIGN TRADE ZONE No. 2**
(Country) (Date) (Name of warehouse, station, pier, etc.)

MARKS AND NUMBERS OF PACKAGES	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
N10-121003-2	<p>1 (20') TANK CONTAINER:</p> <p>3,4-DICHLOROPHENYLISOCYANATE</p> <p>(3,4-DCPI) TOXIC LIQUID</p> <p>HAZARDOUS CARGO CLASS 6.1</p> <p>UN 2250 P.G. II</p> <p>SECURITY SHEET: 6.1 - 04</p> <p>M.F.A.G. TABLE: 370</p> <p>EMERGENCY TELEPHONE:</p> <p>(800) 424-9390</p> <p>HTSUS 2929.10.3000 C/O FR</p> <p>NFB: FRRH0AGRI420LY0</p> <p>ZONE-TO-ZONE TRANSFER NPF</p> <p>FROM FTZ #2 TO FTZ #14B</p> <p>FTZ #2 ADMISSION #23971</p>	48523	98962	EST. NOT VERIFIED	

G.O. No.

**CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND
AND/OR LADING FOR EXPORTATION FOR**

2006... MEMPHIS, TENNESSEE

WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN
DESCRIBED GOODS WERE:

Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals

No. _____
or the packages (were) (were
not) labeled, or corded and

SEARCHED INDEXED
SERIALIZED FILED

APPROX: 11:00 AM

10/15/78

(Inspector or warehouse officer)

47111 1/2

.....

Laden on the—

(Vessel, vehicle, or aircraft)

which cleared for—

on (Date)

as verified by export records.

(Inspector)

(Date)

I truly declare that the statements contained herein are ~~also~~ and correct to the best of my knowledge and belief.

Entered or withdrawn by

CEDAR CHEMICAL CORPORATION

by RUTHIRIN CATALAN & STANLEY H. HARRIS

Star is fact

Atty. in fact *Wm. J. [illegible]*

.....

To the Inspector or Warehouse Officer: The above described

goods shall be disposed of as specified herein.

For the District Director of Customs

Received from the District Director of Customs of above district the

merchandise described in this manifest for transportation and delivery into the customs territory of the customs office of destination.

all packages in apparent good order except as noted hereon

all packages in apparent good order except as noted herein.

~~TRIPLE-B TRANSPORT~~

~~CONFIDENTIAL~~

Attorney or Agent of Carrier

AB0000018675

TOLOCHIMIE

ADRESSER VOTRE CORRESPONDANCE A :

TOLOCHIMIE - Impasse PALAYRÉ
B.P. 1196 - 31037 TOULOUSE CEDEX 1
TÉL : 05 61 31 78 78
TÉLÉCOPIE : 05 61 31 78 50

N / REF : MF / ML

DATE 13-Mai-97

CEDAR

COMMANDE
EXPEDITION

N° 401 27462
N° 419
DU 13 Mai 97

CAMION CITERNE
CONTAINER
WAGON

N°
N° SNU 121003.2
N°

N° DE LOT DU PRODUIT

B303A/13.5.97.5

N° DE LOT DU CONDITIONNEMENT

(s' il y a lieu)

CERTIFICAT D'ANALYSE DU 3,4-DICHLOROPHENYLISOCYANATE

Nous certifions que le produit ci-dessus a la composition suivante :

M E T H O D E	Détermination	Valeur	Unité	Spécification	Méthode d'analyse Tolochimie
1	aspect	conforme		ecide blanc	Visuelle
2	3,4-dichlorophénylisocyanate	99.64	%	> 98.5	To 10.27.88
2	2,3-dichlorophénylisocyanate	0.25	%	pour information	To 10.27.88
2	3-chloro + 4-chlorophénylisocyanate	0	%	pour information	To 10.27.88
2	monochlorobenzène	0	%	< 0.2	To 10.27.88
2	semi-lourds	0.03	%	< 0.8	To 10.27.88
autre	Isocyanate de chlorotolyle	0.08	%		
autre			%		

principe de la méthode:

1	visuelle
2	C.P.G
autre	
autre	

LE RESPONSABLE DU CONTROLE ANALYTIQUE

AB0000018675

RHONE-POULENC AGRO

14-20, RUE PIERRE BAIZET B P 9163
69263 LYON CEDEX 09 - FRANCE
TEL 04 72 85 25 25 - FAX 04 72 85 27 99
TLX 310 088 F RHONE
N° IDENTIFICATION TVA FR 53 969 503 309

ORIGINAL

INVOICE NO: 40115118 DATED: 27.05.1997
SHT : 1997

CONSIGNEE: CECOR
CECOR CHEMICAL CORPORATION
ATTN: BOB CHRISTIAN
HWY 242 SOUTH
AR 72340 WEST HELENA
UNITED STATES

INVOICEE: CECOR
CECOR CHEMICAL CORPORATION
ATTN: BOB CHRISTIAN
P.O. BOX 2749
AR 72340 WEST HELENA
UNITED STATES

DIFF: 01 40127402 0010
VAREP: 04050577
SHIPPING BY:
TERMS OF DELIVERY: CIF - COST INS FREIGHT
TERMS OF PAYMENT: 30 DAYS INVOICE DATE
PAYMENT DATE: 25.06.1997
PAYMENT MODE: TELEGRAPHIC TRANSFER
CURRENCY: USD

EOL: NEW ORLEANS

PROD. CODE: 185764011
NOMINATORIAL NO: 3.4 UNIT CIER 12
QUANTITY: 29000.00 KG
UNIT PRICE: 5.15 USD PER 1 KG
AMOUNT: 1494.750000 USD

SN N°: 29201090

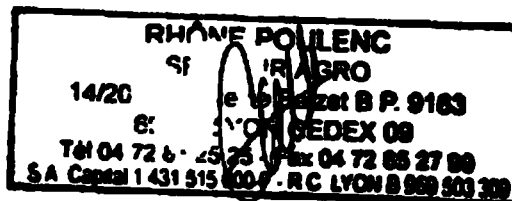
RECEIVED BY: RHONE-POULENC AGRO
14-20 RUE PIERRE BAIZET
CEDEX 09
69263 LYON
FRANCE

TOTAL TO BE PAID

204.750.00 USD

EXONERATION TVA ART. 262TER 1 DU CODE GENERAL DES IMPOTS

TELEGRAPHIC TRANSFER OF SHIP TO SOCIETE GENERALE LYON FRANCE
ENTREPRISES: ACCOUNT NUMBER 780109028
127 SHIP: SHIP 123456789 LYON ENTREPRISES 0228



Plend File

SECRECY AGREEMENT

This Agreement is made and entered as of the date last below written by and between:

Rhône-Poulenc Agro Matières Actives, a French "société en nom collectif" with a capital of 640 250 000 French Francs with its registered office at 14/20, rue Pierre Baizet - 69009 LYON - FRANCE, registered in Lyon under number B 399 135 532,

Represented by Mr Hans MOSER, Strategic Purchasing Director, Business Development,

Hereinafter referred to as "RPAMA",

as the first Party,

And

Cedar Chemical Corporation, a company duly organised under --- law with offices at 5100 POPLAR Avenue, MEMPHIS, TN 38137 USA,

Represented by Mr Geoffrey L. PRATT, Vice President

Hereinafter referred to as "CEDAR",

as the second Party,

Witnesseth:

- ◆ WHEREAS, RPAMA and CEDAR have entered into a certain Secrey Agreement dated as of May 14th, 1999 in relation to the exchange of technical and proprietary information of a confidential nature, including manufacturing and formulation know-how for the manufacture and formulation of Cyclanilide or CS-DCA;
- ◆ WHEREAS, pursuant to a certain Patent and Technical License Agreement dated July 12th, 1999 RPAMA has obtained the right from DEGUSSA-HÜLS to divulge certain valuable technical and proprietary information of a confidential nature of DEGUSSA-HÜLS origin relating to the production of CS-DCA (hereinafter referred to as "the DEGUSSA-HÜLS Confidential Information") to RPAMA's toll manufacturers provided such toll manufacturers agree to be bound by the confidentiality and non-use obligations under the Patent and Technical License Agreement;

h.

- ◆ WHEREAS, RPAMA and CEDAR are interested in exchanging the DEGUSSA-HÜLS Confidential Information for the purpose of evaluating their interest to enter into a toll manufacturing or purchase agreement, or any similar agreement, of CS-DCA (hereinafter "the Purpose").

NOW, THEREFORE, in consideration of the premises and the terms and conditions herein contained the Parties have agreed as follows:

Clause 1. DEFINITIONS

"Affiliate(s)" means any entity that directly or indirectly, through one or more intermediaries, now or hereafter controls or is controlled by or is under common control with a Party hereto, except in countries where ownership of a majority or controlling interest by a foreign entity is not permitted by law, rule or regulations, the parent's direct or indirect voting interest may be less than a majority or controlling interest.

"Control" (including the terms "controls", "controlled by", "controlling" and "under common control with") are understood as meaning the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person or entity whether through the ownership of voting security, by contract or otherwise.

"CEDAR" means CEDAR and its Affiliates.

"DEGUSSA-HÜLS" means DEGUSSA-HÜLS and its Affiliates.

"RPAMA" means RPAMA and its Affiliates.

"Third Party" means any Party other than RPAMA, CEDAR, DEGUSSA-HÜLS and/or their Affiliates.

Clause 2. SECRECY

- 2.1. During the term of this Agreement, CEDAR agrees to hold in trust and confidence and not to disclose to any Third Party, nor to use for its own purposes other than the toll manufacture of CS-DCA for and on behalf of RPAMA any and all of the DEGUSSA-HÜLS Confidential Information disclosed to it by RPAMA under this Agreement.

- 2.2. CEDAR agrees to make available such DEGUSSA-HÜLS Confidential Information only to those of its employees who need to have access to it to carry out the toll manufacture of CS-DCA and shall cause such employees to be bound by the confidentiality and non-use obligations provided herein.
- 2.3. CEDAR shall be responsible for any breach of the confidentiality and non-use obligations provided herein by such employees, whether or not such employees continue to be employees of CEDAR.
- 2.4. CEDAR agrees to return promptly, free of charge, all of the DEGUSSA-HÜLS Confidential Information which is in written form to RPAMA at any time, upon RPAMA's request.
- 2.5. Any documents, drawings, electronic media and other material containing any part of the DEGUSSA-HÜLS Confidential Information shall be destroyed by shredding into pieces or returned to RPAMA upon expiration or termination of this Agreement.
- 2.6. CEDAR's obligations of non-disclosure does not apply to such information and document, which:
- at the time of the disclosure are generally available to the public; or
 - after disclosure become generally available to the public through no fault of CEDAR; or
 - CEDAR can prove to have been in its lawful possession at the time of disclosure by RPAMA.

Clause 3. LIMITATION OF RIGHT

Nothing herein contained shall be construed as granting to a Party any right, including any license, either express or implied, under any Confidential Information disclosed to a Party by another Party hereunder, except for a license to use the Confidential Information to conduct the evaluation as contemplated by the Agreement.

L .

Clause 4. DURATION

This Agreement shall become effective as from the date of its last signature by the parties hereto. Unless terminated earlier or otherwise extended by mutual agreement in writing, this Agreement shall terminate one (1) year later, except for the confidentiality obligations set forth in Clause 2 which shall survive termination or expiration of this Agreement for a period of five (5) years following termination or expiration under article 6.1 of the Patent and Technical License Agreement dated July 12th, 1999 between RPAMA and DEGUSSA-HÜLS.

Clause 5. AMENDMENT

No amendment or consensual cancellation of this Agreement or any provisions or terms thereof and no extension of time or waiver or relaxation or suspension of any of the provisions or terms of this Agreement shall be binding unless recorded in a written document signed by the Parties. Any such extension, waiver or relaxation or suspension which is so given or made shall be strictly construed as relating to the matter in respect whereof it was made or given.

Clause 6. ENTIRETY

This Agreement contains the entire understanding between the Parties hereto regarding the subject matter hereof, and cancels and supersedes all previous agreements, representations and understandings, written or oral between the Parties hereto regarding the subject matter hereof.

Clause 7. ASSIGNMENT

The rights and obligations of this Agreement cannot be assigned to a Third Party by a Party without the prior written consent of the other Party.

Clause 8. APPLICABLE LAW

This Agreement shall be interpreted and construed in accordance with, and its performance shall be governed by French law.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed as of the day and year last below written.

Rhône-Poulenc Agro Matières Actives



Name: Hans MOSER

Title: Strategic Purchasing Director,

Business Development

Date: 12.12.99

Cedar Chemicals Corporation



Name: Geoffrey L. PRATT

Title: Vice President

Date: November 22, 1999.

Aventis CropScience**Serge RAVET**

Strategic Sourcing Manufacturing Operations
Toll Manufacturing Manager
☎: (33) 4 72 65 29 20 - Fax: (33) 4 72 65 29 68

CEDAR**To the attention of Mr G. PRATT****Fax : (1) 901 884 5398****SR/FB - 002.00****Page(s) : 3****January 10, 2000***File***SUBJECT : MoU CYCLANILIDE**

*CC Jim Rump
Kevin Payne*

Dear Geoffrey,

You will find herewith comments on the MoU, this document is still reviewed by our legal department but it seems important we progress on the points indicated below :

- Replacement of CPDM by CDM in the denomination of Cyclopropan 1,1 Dicarboxylic Acid Dimethyl Ether, (as it is in the Secrecy Agreement).
- Replacement of the wording "Definitive Agreement" by "Agreement".
- **2C Product :**

I remind that the estimate of our needs for the 3 next campaigns are the following :

- 1st Campaign = product available end of december 2000
- 2nd Campaign = product available end of may 2001
- 3rd Campaign = product available end of may 2002

The first campaign is sustained to the obtention of the right of importation of CDM in the US, thus it could be possible we have two campaigns in the first contract year.

Therefore, I propose that the volume of the third contract year should be the difference between 420 Metric Tons and the cumulated volume of the 2 previous contract years.

The minimum volume after the third contract year should not be precised.

SR/FB - 00/002 - 10/01/00**Page 1/3****AVENTIS CropScience, 14-20 Rue Pierre Boinat, B.P.9163, 69263 LYON Cedex 09**

- **2D Scheduling :**

R.P. will provide Cedar with an estimate one year before Product is required and these figures will be adjusted 3 months before the Campaign.

- **2E Raw Material Usage :**

For the avoidance of any doubt.

The saving under consumption of raw materials below - 3,5 % shall be shared equally.

- **2H Waste Disposal :**

As we have now an estimation now of the waste disposal I propose :

Replacement of "Cost of waste disposal shall be for Rhône-Poulenc" by "the cost of waste disposal charge to R.P. cannot exceed 1,1 \$/ Kg of product".

- **2I Toll Fee :**

To be clarified :

- The fee of 6,5 \$/ Kg applies on all the volume of production if the produced volume is above 200 Metric Tons in a contracted year.

- The index of reference for an escalation formula.

For the avoidance of doubt, to be precised that this toll fee has already included the amortization of the capital improvement of paragraph 2F.

- **3 Schedule of target Date :**

3C Maintain April 1, RP to deliver a first draft of an Agreement.

- **Additional clauses to be added :**

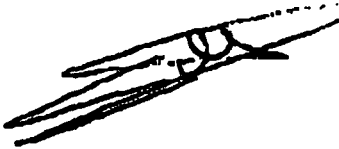
- a secrecy clause specific to the MoU.

- a new paragraph at the end of the document to provide for the assignment or transfert to the MoU or the Definitive agreement as the case may be to any entity which may be a successor in interest to Rhône-Poulenc.

- a new clause to provide for the settlement of disputes arising out in relation to this MoU.

Please don't hesitate to call me if you need some details on these points.

Best regards,



Serge RAVET
Toll Manufacturing Manager

CHARLES MITCHELL CRUMP
ALLEN T. MALONE
PHILIP G. WAGNER
ROBERT L. BARNES
HENRY L. KLEIN
ROBERT J. FINESTEIN
JOHN L. RYDER
THOMAS R. BUCKNER
BRUCE M. SMITH
TONI CAMPBELL, PARSON
STEVEN N. DOUGLASS
ELIAN NEEL, JR.
RANDY S. SANDERSON
LYNDA R. SCHOLL
-DAVID R. FRIEDBERG
RICHARD J. MEERS
THOMAS M. TWEEL
ALLISON T. GILBERT
ANGELA A. GUNES
SHAWN A. TIEWELL

-ALSO ADMITTED IN MISSISSIPPI
-ALSO ADMITTED IN DISTRICT OF COLUMBIA

**LAW OFFICES
APPERSON, CRUMP & MAXWELL, PLC**

SUITE 2110
ONE COMMERCE SQUARE
MEMPHIS, TENNESSEE 38103-2610
801 / 525-1711

FACSIMILE 801 / 521-0788

File
Ch. 10/11/00
March 3, 2000

EAST OFFICE:

SUITE 100
1750 VORAY PARKWAY
MEMPHIS, TENNESSEE 38120-4376
801 / 758-0300
FACSIMILE 801 / 757-1886

CHARLES W. MITCHELL, 1840-1834
WILLIAM R. MITCHELL, 1872-1840
JOHN W. APPERSON, 1835-1880

OF COUNSEL:
JOHN B. MAXWELL, JR.
JACKSON, SHIELDS,
YEISER & CANTRELL

VIA FAX

Mr. Geoffrey L. Pratt
Vice President
Cedar Chemical Corporation
24th Floor, Clark Tower
5100 Poplar Avenue
Memphis, TN 38137

Re: Proposed Rhone-Poulenc Agreement

Dear Geoff:

Enclosed is a new version of the Memorandum of Understanding which incorporates some of the new concepts inserted in Rhone-Poulenc's draft, but reinserts many of the substantive provisions which Rhone-Poulenc deleted. The reinserted terms (some of which I have revised slightly from our initial draft) include:

- Except for the eighty (80) ton campaign to be initiated in the fourth quarter of the year 2000, production campaigns will be for no less than one hundred fifty (150) metric tons and there will be no more than one production campaign in each Contract Year.
- The cost of the Capital Improvements would be amortized, and effectively reimbursed by Rhone-Poulenc, over the initial four hundred twenty (420) metric tons of Product purchased by it, but in any event, twenty percent (20%) of the Capital Improvements must be reimbursed by the end of the First Contract Year and an additional forty percent (40%) by the end of the Second Contract Year and the balance by the end of the Third Contract Year.

APPERSON, CRUMP & MAXWELL, PLC

**Mr. Geoffrey L. Pratt
March 3, 2000
Page Two**

- The toll fees will not be reduced by the amount of the "amortization fee" after four hundred twenty (420) metric tons have been purchased (a point that Rhone-Poulenc seems to be confused about).
- I pushed up the original deadlines under Article 3 to March 15, 2000.
- Any Capital Improvement costs incurred by Cedar following execution of the Memorandum of Understanding are for Rhone-Poulenc's account.

I could underscore the clauses which we either reinserted or, otherwise, revised which represent the principal difference between Rhone-Poulenc's latest draft and the enclosure. I would suggest, however, that you submit a clean draft and describe the principal differences in your letter that accompanies the draft.

Sincerely yours,



Allen T. Malone



ATM:cs
Enclosure



Facsimile Transmittal

File

To: ~~Serge Ravet~~ Fax: 9-011-33-4-72-85-2066
From: Geoff Pratt Date: 03/07/00
Re: MOU Cyclanilide Pages: 11
Phone: 901-684-5373 Cc: Randal Tomblin
Joe Mancini
Chris McGee
Allen Malone

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

Dear Serge,

I offer the following comments on your fax of February 11, 2000 regarding the

Your proposal is acceptable for all paragraphs up to and including article 2A. We note that you have extended the term from 3 years to roughly 3.5 years but this probably will not affect the timing of revenue to Cedar significantly.

In articles 2A, B, C, F, I and 3B you have changed the business terms significantly, all to your advantage. The business terms were clearly defined and agreed to in our meeting of October 13, 1999. At that time Cedar compromised between our normal and reasonable charges in the spirit of meeting your cost requirements. Your latest proposed language requires Cedar to invest over 1 million dollars and reserve our plant for you with no commitment from Aventis for quantity of product or timing. I do not believe that you would agree to such a proposal if our roles were reversed. Let us please get back to the original business agreement so that project can move forward.

Cedar Chemical Corporation

I would remind you of the basis for our original agreement:

Cedar's economics are based upon your statement that volumes would be 80MT in year 1, 160MT in year 2, 180MT in year 3.

Cedar's pricing is: \$8.00/ kg for the first campaign, which is expected to be 80MT, \$7 / kg for subsequent campaigns between 150-200 MT, and \$6.5 / kg for campaigns over 200 MT. These campaign lengths were priced in response to your request. These campaigns are to be continuous. If you anticipate that campaigns will be shorter then Cedar will estimate pricing for shorter campaigns.

Let us assume that Cedar spends funds for detailed design of the plant modifications and for the additional equipment required. If Aventis cancels the project for any reason Cedar will have to absorb the cost with no hope of return. We are prepared to absorb as the cost of doing business, expenditures associated with the generation of business, and preparing preliminary design packages and quotations. Expenditures for detailed engineering and equipment, which need to begin soon, will not begin if you cannot agree to cover costs if the project is stoppage is terminated by Aventis prior to startup.

After startup Cedar can earn a reasonable return on the capital investment only if Aventis takes the 420MT that you told us you wanted. All of the economics were based on the volume and timing projection provided by you. However, we recognizes that you cannot predict the future and Cedar is prepared to share the risk by not requiring a take or pay contract for the product. We must partially protect ourselves by requiring that the capital cost be returned to us if, for no fault of Cedar's, less than the amount of product upon which the economics were based is purchased. We use the amortization method to accomplish this. We divide the capital cost by the number of product units upon which the economics are based, in this case 420,000kgs.

Aventis will pay amortization only on the difference between the amount of product you take and 420MT. The last sentence of article 2C provides insufficient protection for Cedar. If you take very little product in the previous contract years Cedar would have to wait over three years to get most of the capital returned.

Your assumption that the fees will be reduced by the amortization amount when the 420 MT is taken is not valid. The fees do not include the amortization amount. If they did Cedar would show no profit on the project. The fees do include depreciation of the capital over 10 years.

Articles 2D, E, G, H, J, 3A, C, D, 4, 5, 6 are ok.

Attached is a new MOU which contains our thoughts on dealing with the above issues. We must reach agreement on these business issues soon or the project will be delayed. It does not make sense to begin preparation of a contract until the business basis is agreed upon. Please let me have your thoughts on how to resolve these differences.

Regards,

Geoff Pratt



Aventis

**Memorandum of Understanding - Cyclanilide
Dated September 1, 2000**

Aventis CropScience



CEDAR
Mr Geoffrey L. PRATT
5100 Poplar Ave.
Suite 2414
Memphis, TN 38137
UNITED STATES

September 1, 2000

Réf : fb/SR 108.00

CONFIDENTIAL

SUBJECT : MOU OF CYCLANILIDE

Dear Geoffrey,

Please find enclosed two originals of the MoU which have been signed by Hans Moser on behalf of Aventis CropScience.

Thank you for your cooperation.

Best Regards.

P/o *Federic Ravet*

Serge RAVET
Toll manufacturing manager

MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING is made and entered into as of the date last below written (the "Effective Date"), by and between

Cedar Chemical Corporation, a Delaware corporation, having its principal place of business at Suite 2414 Clark Tower, 5100 Poplar Avenue, Memphis, Tennessee 38137 (hereinafter referred to as "CEDAR"),

and

Aventis CropScience Matières Actives, a French "société en nom collectif" having its registered office at 14/20, rue Pierre Baizet, 69009 LYON, France (hereinafter referred to as "Aventis").

Witnesseth:

- ◆ WHEREAS, Aventis desires to retain an independent third party contractor to toll manufacture for it Cyclanilide (1-(2,4-dichlorophenylaminocarbonyl)-cyclopropane carboxylic acid) (hereinafter "Product") from 2,4 DCA (2,4 Dichloro aniline) (hereinafter "DCA") and (cyclopropane- 1,1-dicarboxylic acid dimethyl ether (CPDM) (hereinafter "CPDM"), DCA and CPDM together with Sodium Methoxide (hereinafter "NaMO") being sometimes referred collectively herein as the "Raw Materials"; and
- ◆ WHEREAS, CEDAR owns and operates a chemical manufacturing facility located at West Helena, Arkansas which, following installation of certain capital improvements and equipment (the "Capital Improvements"), is deemed capable of producing Product from DCA and CPDM utilizing Aventis' manufacturing process (the "Process") disclosed by Aventis to Cedar pursuant to a Secrecy Agreement between Aventis and Cedar dated as of May 14, 1999 (the "Secrecy Agreement"); and processes disclosed to Cedar pursuant to a Secrecy Agreement between Aventis and Cedar dated as of November 22, 1999 (the "Degussa Secrecy Agreement").
- ◆ WHEREAS, it is agreed that CEDAR and Aventis shall promptly commence negotiations with each other in good faith with the intent of reaching an agreement (the "Agreement") satisfactory in form and substance to their respective managements and incorporating the terms and principles set forth herein.

NOW, THEREFORE, in consideration of the premises and the terms and conditions herein contained, the Parties agree as follows:

Article 1 - Purpose. The purpose of this Memorandum of Understanding is to set forth the terms and principles under which the parties will negotiate in good faith with the objective of entering into a toll manufacturing and supply Agreement whereby Cedar will produce Product for Aventis, and under which Cedar will initiate engineering studies and make equipment purchase commitments to enable it to construct and complete the Capital Improvements in time to begin producing Product for Aventis in the fourth quarter of the year 2000 in the quantities and in accordance with the terms and conditions set forth herein.

Article 2 - Agreement. The parties intend to negotiate in good faith with the objective of entering into an Agreement which will include among other terms, the following provisions:

A. **Term.** The initial term (the "Initial Term") shall be from the date of execution of the Agreement through December 31, 2006. Thereafter, the term of the Agreement shall be renewed for successive two year periods unless terminated by either party upon notice to the other not less than one (1) year prior to the end of the Initial Term or one year prior to the end of any extension of the Initial Term of Agreement; provided that the Agreement shall not be so extended unless, prior to the end of the Initial Term or of any extended term, the parties will have negotiated and reached mutual agreement in respect of the terms of such extension (including the price and quantity).

B. **Raw Materials.** Aventis shall be responsible for supplying Cedar, at its cost, the Raw Materials in sufficient quantities to enable Cedar to produce, in campaigns scheduled in accordance with the provisions of Article 2D, all quantities of Product ordered by Aventis, provided that in the event Cedar is able to obtain a more favorable price than Aventis for purchase of NaMO, following prior approval from Aventis, Cedar shall purchase such quantities of NaMO as shall be required for it to perform hereunder, but for the account of Aventis. Cedar shall supply, at its cost, all raw materials other than the Raw Materials and Aventis shall reimburse Cedar its actual cost for the purchase of such raw materials within thirty (30) days following the date of Cedar's invoice, provided that Cedar shall in all cases employ a reasonable competitive purchasing process. Cedar shall reimburse Aventis for all of Aventis' costs in supplying Raw Materials to Cedar, if such Raw Materials are used by Cedar to produce Product, which due to Cedar's negligence or failure to follow Aventis' process, does not meet the specifications set forth in Appendix A.

C. **Product.** Aventis shall order and Cedar shall produce from Raw Materials supplied by Aventis not less than seven hundred ninety (790) metric tons of Product during the Initial Term of the Agreement. For indicative purposes, Aventis' current estimate of its yearly requirements for the Product is one hundred fifty (150) metric tons per year, provided that such figure is provided for information purposes only and will not be binding.

Aventis shall order and purchase eighty (80) metric tons of Product from Cedar by December 31, 2000, and shall order and purchase one hundred fifty (150) metric tons of Product from Cedar by December 31, 2001.

In the event Aventis shall not have ordered and purchased from Cedar pursuant to the Agreement, at least one hundred and twelve (112) metric tons of Product during 2002 and in each calendar year of the Initial Term thereafter, then Aventis shall pay an amount equal to \$8.00 multiplied by the difference between the amount of Product ordered and purchased and one hundred and twelve (112) metric tons, provided however, that any such amounts paid by Aventis will be credited as a prepayment for any Product to be delivered in the following calendar year of the Initial Term in excess of one hundred and twelve (112) metric tons.

If during 2002 or any calendar year of the Initial Term thereafter, Aventis orders and purchases an amount of Product which exceeds one hundred and twelve (112) metric tons, such excess shall be credited towards, and shall thereby reduce, Aventis' commitment in respect of the one hundred and twelve (112) metric tons of Product for the following calendar year of the Initial Term, provided that the credit will be limited to twenty-eight (28) metric tons.

D. **Scheduling.** Aventis shall submit its good faith estimate of its orders for Product to be produced by Cedar in each calendar year during the term of the Agreement by no later than July 1 of the previous calendar year, provided that such estimate will be for the purpose of facilitating scheduling of manufacture only and will not be binding, provided that a firm order will be issued by Aventis by October 31 of such year, which order shall specify the delivery date(s) for the Product.

E. **Raw Material Usage.** Maximum usage factors applicable to consumption of Raw Materials (expressed in kilograms of Raw Materials consumed per kilogram of Product) shall be determined based on actual results achieved during the first industrial production of Product by Cedar. Thereafter, any over-consumption of Raw Materials (of more than 3.5%) shall be for Cedar's account. The savings on any under-consumption of Raw Materials of more than 3.5% shall be shared equally by the parties.

F. **Capital Improvements.** Cedar's cost of Capital Improvements shall be amortized over the first seven hundred ninety (790) metric tons of Product to be produced by Cedar and paid for by Aventis during the Initial Term of the Agreement. For example, if the agreed cost of the Capital Improvements for which Aventis shall be responsible is \$750,000.00, \$ 0.95 for each kilogram of Product purchased by Aventis from Cedar hereunder shall be credited to Aventis' obligation to reimburse Cedar's cost of Capital Improvements. If Cedar has not been totally reimbursed for the agreed cost of the Capital Improvements by December 31, 2006, Aventis shall be responsible for reimbursing Cedar the balance of its costs of Capital Improvements set forth in Appendix B by December 31, 2006.

G. **Startup.** Aventis shall provide reasonable technical assistance to Cedar during startup of the initial campaign.

H. **Waste Disposal.** The parties shall cooperate to determine the most cost effective and environmentally sound method to dispose of wastes generated by production of Product. Costs of waste disposal shall be for Aventis' account, provided that the cost of the waste disposal charge to Aventis shall not exceed \$ 1.25 per kilogram of Product.

I. **Toll Fees.** Cedar's toll manufacturing fee for production of Product for Aventis during the Initial Term shall be \$8.00 per kilogram for all Product ordered for production. The fee set forth above includes all amounts relating to the depreciation of the Capital Improvements referred to in Article 2F above). Commencing with the calendar year 2002, and each calendar year thereafter, the fees set forth above may be adjusted, to reflect increases in manufacturing costs according to the escalation formula set forth in Appendix C hereto.

Cedar shall invoice Aventis at the end of each month during the term of the Agreement for all quantities of Product delivered during such month, which deliveries shall be Ex works, at the applicable toll manufacturing fee, and for all raw materials (including NaMO) purchased by Cedar hereunder. Such invoices shall be due and payable by Aventis thirty (30) days from date of invoice.

J. **Miscellaneous.** The Agreement shall contain additional terms and provisions normally contained in agreements of this nature.

Article 3 - Schedule of Target Dates.

A. The detailed engineering drawings describing the Capital Improvements, and Cedar's final cost to install the Capital Improvements to be amortized over the Initial Term of Agreement are attached as Appendix B. Appendix B includes a schedule of the costs incurred and to be incurred by Cedar while negotiation of the Agreement is pending. All such costs and contractual commitments incurred by Cedar as set out in such schedule of costs shall be for Aventis' account, either for amortization and reimbursement in accordance with the provisions of Article 2F hereinabove, or, alternatively, in the event that, following good faith negotiations, the Agreement is not executed by the parties on or before December 31, 2000, or, if the Agreement is executed by the parties, but is subsequently terminated for reasons other than for default by Cedar prior to the end of the Initial Term, such costs (to the extent incurred by Cedar and unamortized) shall be paid in full by Aventis to Cedar upon the occurrence of any such event.

B. The Product and Raw Material specifications are attached as Appendix A. The Appendices hereto will be used as Exhibits to the Agreement.

C. On or before September 30, 2000, Aventis shall prepare and deliver to Cedar a proposed first draft of the Agreement.

D. The parties will work together with the objective of submitting a final draft of the Agreement to their respective managements for approval on or before October 31, 2000.

Article 4 - Nature of Agreement. The provisions of this Memorandum of Understanding are intended by the parties to be binding. This Memorandum of Understanding shall become effective on the Effective Date and remain valid until the earlier of the signature of the Agreement or December 31, 2000.

Article 5 - Confidentiality. The parties hereby agree that any information exchanged pursuant hereto shall be subject to the provisions of the Secrecy Agreement and shall be considered "Confidential Information" as such term is defined in the Secrecy Agreement, provided that: (i) the parties hereby agree to extend the term of the Secrecy Agreement until December 31, 2000 and (ii) any information exchanged pursuant hereto which would constitute Degussa-Huls Confidential Information as such term is defined in the Degussa Secrecy Agreement, shall be subject to the Degussa Secrecy Agreement.

Article 6 - Dispute Resolution, Applicable Law. All disputes arising in connection with the present Memorandum of Understanding shall be finally settled under the rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules.

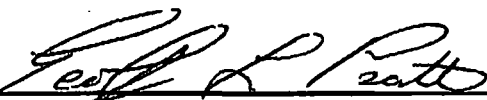
The arbitration shall be conducted in the English language in New York City.

This Memorandum of Understanding shall be construed in accordance with and governed by the laws of the State of New York.

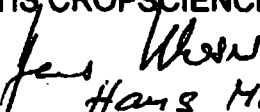
Article 7 - General. The terms of this Memorandum of Understanding may only be amended, modified or waived by a separate document in writing which has been signed by both parties. This Memorandum of Understanding supersedes any prior written or oral agreements or understandings between the parties with respect to the subject matter hereof and may be executed in counterparts, each of which shall constitute an original and all of which, when construed together, shall constitute the same instrument. Unless otherwise expressly agreed by the parties, neither party may transfer or assign this Agreement to any third party without the prior written consent of the other party.

Executed by the parties, acting by and through their authorized representatives, as of the dates appearing below.

CEDAR CHEMICAL CORPORATION

By: 
Name: GEOFFREY L PRATT
Title: VICE PRESIDENT SPECIALTY CHEMICALS
Date: August 9, 2000

AVENTIS CROPSOURCE MATIÈRES ACTIVES

By: 
Name: Hans MOSER
Title: Head Global Strategy
Date: 31. 08. 2000

Appendix A: Product and Raw Material Specifications

Appendix B: Capital Expenditures

Appendix C: Escalation Formula

APPENDIX A 1/4 : Product and Raw Material Specifications

Cyclanilide Specifications

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications (g/Kg)	Frequency
• Appearance	Visual	White to yellowish flowing powder	each batch
• CYCLANILIDE content	C.817.06.95	960 min.	each batch
• Water	CIPAC MT 30.1	5 max.	each batch
• Xylène	C.816.06.95	1 max.	each batch
Process Impurities :			
- RPA 116741 (imp.A)	C.821.07.95	3 max.	each batch
- 2,4 dichloroaniline	C.821.07.95	1 max.	each batch
- RPA 090945	C.821.07.95	10 max.	each batch
- RPA 111030	C.821.07.95	10 max.	each batch
- RPA 114924	C.821.07.95	15 max.	each batch
- RPA 093903	C.821.07.95	1 max.	each batch
- RPA 090899	C.821.07.95	1 max.	each batch

Cross contamination prevention :

All possible impurities from the implementation of an other production in the equipment involved in manufacturing of Cyclanilide, must be identified and quantified.

2. PACKAGING

- Polyéthylène drums : 120 l.
- Net weight : 50 Kg of Cyclanilide



APPENDIX A 2/4 : Product and Raw Material Specifications

2,4 Di Chloraniline Specifications (For Cyclanilde)

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications (g/Kg)	Frequency
• Appearance	Visual	Molten product colourless to brown	each batch
• Solidification point		60° C min.	each batch
• Purity	Gas chromatography	990 min.	each batch
• Water	Karl Fischer	1 max.	each batch
Process Impurities			
- 2,5 Di chloraniline	Gas chrom.	2 max.	each batch
- 2,6 Di chloraniline	Gas chrom.	1 max.	each batch
- 3,4 Di chloraniline	Gas chrom.	1 max.	each batch
- Others impurities (sum)	Gas chrom.	3 max. (1 max for each)	each batch
- Chlorides		100 ppm max.	

2. PACKAGING

- Steel drum for liquid product.

APPENDIX A 3/4 : Product and Raw Material Specifications

CDM Specifications

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications
• Purity	GC / MS	min. 97,50 %
• Dimethylmalonate	GC / MS	max. 1,00 %
• Dimethylformamide	GC / MS	max. 0,75 %

fl

APPENDIX A 4/4 : Product and Raw Material Specifications

Sodium Methylate Specifications Solution 30 % in Methanol

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications
<ul style="list-style-type: none">• Total alkalinity calculated as : NaOCH₃ NaOCH₃ content	Titration	29,5 % - 31,0 % 29,5 % - 30,5 %
<ul style="list-style-type: none">• Na₂CO₃ + NaOH content	Titration	Max 0,5 %
<ul style="list-style-type: none">• Color	ISO 6271	Max 30 APHA

46.

APPENDIX B 1/1 : Capital Expenditures

Cost Estimate Summary : Cyclanilide Campaign

	Labor	Material	Total
• 1.0 Site work			
Subtotal	\$ 8 400,00	\$ 1 000,00	\$ 9 400,00
• 2.0 Civil			
Subtotal	\$ 23 275,00	\$ 11 500,00	\$ 34 775,00
• 3.0 Reactors (Colled/ Jacketed)			
Subtotal	\$ 25 550,00	\$ 27 600,00	\$ 53 150,00
• 4.0 Vessels/Tanks			
Subtotal	\$ 5 600,00	\$ 10 000,00	\$ 15 600,00
• 5.0 Heat exchangers			
Subtotal	\$ 1 750,00	\$ 18 000,00	\$ 19 750,00
• 6.0 Rotating Equipment			
Subtotal	\$ 6 300,00	\$ 31 000,00	\$ 37 300,00
• 7.0 Filtering Equipment			
Subtotal	\$ 700,00	\$ 6 000,00	\$ 6 700,00
• 8.0 Piping			
Subtotal	\$ 107 940,00	\$ 91 917,50	\$ 199 857,50
• 9.0 Electric/ Instrumentation			
Subtotal	\$ 104 860,00	\$ 158 750,00	\$ 263 610,00
• 10.0 Inspection/ Engineering			
Subtotal	\$ 35 000,00	\$ 0,00	\$ 35 000,00
• 11.0 Rentals & 12.0 Miscellaneous			
Subtotal	\$ 840,00	\$ 6 500,00	\$ 7 340,00
SUBTOTAL	\$ 320 215,00	\$ 362 267,50	\$ 682 482,50
Contingency (10 %)	\$ 32 021,50	\$ 36 226,75	\$ 68 248,25

APPENDIX C 1/1 : Fee Escalation Formula

Application commencing in 2002

$$P_{n+1} = P_n \left[0,15 + 0,425 \frac{W_{n+1}}{W_n} + 0,425 \frac{PPI_{n+1}}{PPI_n} \right]$$

- P_{n+1} = Adjusted toll fee for the contract year in \$ / Kg of Cyclanilide.
- P_n = Toll fee of the previous contract year in \$ / Kg of Cyclanilide
- W_{n+1} = Employment Cost Index published by the US Bureau of Labor Statistic available the month of december preceding the date of ajustement.
- W_n = Employment Cost Index of the previous contract year.
- PPI_{n+1} = Producer Price Index, for the available month of december preceding the date of ajustement :
 - Industry and Product : Industrial Organic Chemical, Code 296.
 - Subcategory : Agricultural Chemical, nbc, other pesticidal preparations primarily for agricultural, Code 2879 – 8.
- PPI_n = Producer Price Index of the previous contract year.

40.

M. Garner

From: Dan.Stahl@aventis.com
Sent: Friday, September 01, 2000 8:23 AM
To: mgarner@cvrtmail.com
Cc: Serge.Ravet@aventis.com; Dave.Linhardt@aventis.com
Subject: PPI Index

Hi Melissa-

I don't think we've met yet but I am part of the same Aventis Global Sourcing Team Serge Ravet belongs to, however I'm located here in the US. I will be supporting Cedar and Serge in our implementation of the cyclanilide manufacturing.

Serge asked me to forward on to you the PPI Index information for the MOU. The Industrial Organic Chemicals is number 286 I believe you may have thought it was 296. 2879-8 is a valid code number that we found in hardcopy of the PPI Detailed Report. If you are doing your searching via the Internet, the Dept of Labor site can be difficult. Unless all the magic "symbols and spaces" are included in the query, the report may not print. Let me know if you would like me to obtain the data and we can fax to appropriate persons.

We also need your labor index. Thanks for your help, I'm sure we'll be in touch!

Dan Stahl
Aventis Global Sourcing
Phone: 919.549.2195
Fax: 919.549.2003
E-mail: Dan.Stahl@aventis.com



August 10, 2000

Serge Ravet
Toll Manufacturing Manager
Aventis Crop Science
14-20 rue Pierre Baizet - B.P. 9163 F-69263
Lyon Cedex 09
France

Dear Serge,

Enclosed are the three originals of the MOU which have been signed on behalf of Cedar. You will send us an original when Hans has signed for Aventis.

This will end my formal tour of duty on the project and you should contact Chris McGee regarding the Agreement which I believe you will draft. I will be available for comment and clarification as the Agreement proceeds, should that be necessary.

Regards,

A handwritten signature in black ink, appearing to read "Geoffrey Pratt", is written over a horizontal line.

Geoffrey Pratt

Cc: Chris McGee

Aventis CropScience



**CEDAR
Mr Geoffrey L. PRATT
5100 Poplar Ave.
Suite 2414
Memphis, TN 38 137
UNITED STATES**

3 August, 2000

Réf : fb/SR 106.00

CONFIDENTIAL

Subject : Cyclanilide MoU

Dear Geoffrey,

You will find herewith three copies for signature of the Cyclanilide MoU we agreed on.

While you will send them back , Hans Moser will be in the office to sign them on behalf of A.C.S.

Best Regards.

**Serge RAVET
Toll Manufacturing Manager**

AGREEMENT

THIS AGREEMENT entered into as of the 15th day of November, 2000, by and between Aventis CropScience USA LP ("Aventis"), successor to Rhone Poulenc Ag Company ("R-P") and Cedar Chemical Corporation ("Cedar").

WHEREAS, R-P and Cedar entered into an Assignment and Assumption Agreement dated as of June 1, 1997, (the "Agreement") pursuant to which Cedar assigned to R-P its rights and obligations under that certain Ethephon Supply Agreement between Cedar and MicroFlo Company dated as of January 1, 1996, as amended by Amendment Agreement dated February 18, 1997, and Aventis assumed Cedar's obligations under the Ethephon Supply Agreement and agreed to pay Cedar certain commissions in connection with its performance thereunder; and

WHEREAS, Aventis desires to purchase from Cedar, and prepay Cedar's rights to receive commissions pursuant to the Agreement, and Cedar is willing to accept such prepayment in accordance with the terms and conditions hereof.

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, the parties agree as follows:

1. Aventis shall pay to Cedar the sum of Six Million Dollars (\$6,000,000) on or before December 15, 2000, which payment shall be made by check payable to Cedar for delivery to Cedar's office in Memphis, Tennessee to the attention to J. Randal Tomblin, President, via Federal Express, on the first business day following the full execution of this Agreement and delivery of same to Aventis.

2. Cedar agrees to accept the payment referred to in paragraph 1 of this Agreement in full satisfaction of its rights under the Agreement, including its right to receive commissions thereunder and its right to require that the Ethephon Supply Agreement be reassigned to Cedar in accordance with the terms of the Agreement, and will release R-P and Aventis from all remaining obligations to Cedar under the Agreement accruing on or after the date on which Cedar receives such payment.

3. The undersigned signatories represent that they are duly authorized to execute this Agreement on behalf of the respective parties hereto and that the Agreement, when so executed, shall be binding and enforceable as to said parties and their respective successors and assigns.

EXECUTED as of the date first above appearing.

AVENTIS CROPSOURCE USA LP

By: 

Title: VP/GM

Date: 12/6/00

CEDAR CHEMICAL CORPORATION

By: 

Title: President & CEO

Date: Nov 27, 2000



J. Randal Tomblin
President and CEO

November 13, 2000

Mr. John Wichtrich
Vice President/General Manager
Sedagri
P.O. Box 12014
2 T.W. Alexander Parkway
Research Triangle Park, North Carolina 27709

Dear John:

Per your request, we have reviewed the possibility of producing ethephon for Sedagri in the future and regret to inform you that we will not be able to do so.

Although some of the equipment we previously used for ethephon production remains in place, we have committed the production facility to other uses for the foreseeable future. In addition to production of cylanilid for Aventis, Cedar utilizes the facility for production of trishydroxy-amino methane, a proprietary buffering agent used in resin and pharmaceutical applications, and 2-Amino butanol, an intermediate used for the production of ethambutol, the primary drug used to combat tuberculosis.

If anything should change in the future, I will, of course, let you know.

Sincerely,

Randal Tomblin

cc: Jeff Sorrell

ADEQ0015577

Aventis
Cyclanilide

Pending Contract – waiting for another trial run

MANUFACTURING AND SUPPLY AGREEMENT

THIS MANUFACTURING AND SUPPLY AGREEMENT (the "Agreement") is made and entered into as of the date last below written (the "Effective Date") by and between Cedar Chemical Corporation, a Delaware corporation, having its principal place of business at Suite 2414 Clark Tower, 5100 Poplar Avenue, Memphis, Tennessee 38137 (hereinafter referred to as "Cedar"), and Aventis CropScience Matières Actives, a French "société en nom collectif" having its registered office at 14/20, rue Pierre Baizet, 69009 LYON, France (hereinafter referred to as "Aventis").

WITNESSETH:

- ◆ WHEREAS, Aventis desires to retain an independent third party contractor to manufacture for it Cyclanilide (hereinafter the "Product") from DCA and CPDM.
- ◆ WHEREAS, Cedar owns and operates a chemical manufacturing facility located at West Helena, Arkansas which, following installation of certain capital improvements and equipment defined below, will be capable of producing Product from DCA and CPDM utilizing Aventis' manufacturing process disclosed by Aventis to Cedar pursuant to the Secrecy Agreement and processes disclosed to Cedar pursuant to the Degussa Secrecy Agreement and pursuant hereto;
- ◆ WHEREAS on August 31, 2000, the Parties signed a Memorandum of Understanding (the "MOU") whereby they agreed that they would promptly commence negotiations with each other in good faith with the intent of reaching an agreement satisfactory in form and substance to their respective managements and incorporating the terms and principles set forth herein.

NOW, THEREFORE, in consideration of the promises and the mutual covenants herein contained, the Parties hereto agree as follows:

Article 1. DEFINITIONS

~~When used in this Agreement, each of the capitalised-capitalized terms set forth in this Article 1 shall have the meaning set forth below:~~

"Affiliate" means any entity that directly or indirectly, through one or more intermediaries, now or hereafter, controls or is controlled by or is under common control with a Party hereto, except that in countries where ownership of a majority or a controlling interest by a foreign entity is not permitted by law, rules or regulations, the parent's direct or indirect voting interest may be less than a majority or controlling interest. "Control" (including the terms "controls" "controlled by", "controlling" and "under common control with") are understood as meaning the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person or entity whether through the ownership of voting securities, by contract or otherwise.

"Capital Improvements" means the capital improvements ~~set forth in the detailed engineering drawings attached hereto as~~described in Appendix 1.

"CPDM" means (cyclopropane- 1,1-dicarboxylic acid) dimethyl ether.

"Cyclanilide" means (1-(2,4-dichlorophenylaminocarbonyl)-cyclopropane carboxylic acid).

"DCA" means (2,4 Dichloro aniline).

"Degussa Secrecy Agreement" means the Secrecy Agreement between Aventis and Cedar dated as of November 22, 1999.

"EPA" means the Environmental Protection Agency of the United States and all applicable state agencies responsible for the protection of the environment.

"NaMO" means Sodium Methoxide.

"Non-Strategic Raw Materials" means the following raw materials: xylene, formic acid and caustic soda.

"Party" or "Parties" means Aventis and/or Cedar.

"Process" shall mean all the scientific and technical information useful for the production of Product conforming to the Specifications and shall include all related specifications, secret processes, process patents, patent applications, trade secrets, know-how, information on use and choice of equipment and raw materials, process books, quality control plans, pipe and instrument designs, methods of analysis, engineering data, installation plans and operation procedures and shall include all process information disclosed to Cedar by Aventis pursuant to the Secrecy Agreement and pursuant to the Degussa Secrecy Agreement.

"Product" means Cyclanilide.

Draft dated February 8, 2001

"Plant" means the chemical manufacturing facility located at West Helena, Arkansas which is owned and operated by Cedar.

"Raw Materials" means DCA, CPDM and NaMO.

"Raw Materials Specifications" means the specifications for the Raw Materials and Non-Strategic Raw Materials attached as Appendix 2 hereto.

"Secrecy Agreement" means the Secrecy Agreement between Aventis and Cedar dated as of May 14, 1999.

"Specifications" means the specifications for the Product set forth in Appendix 3.

"Third Party(ies)" means any person or entity other than a Party or an Affiliate of a Party.

Unless otherwise stated, all clauses and articles referred to herein are clauses and articles of this Agreement.

Article 2. MANUFACTURING

- 2.1. Subject to the terms and conditions of this Agreement, Cedar hereby agrees to use the Process and any manufacturing or other information and the Raw Materials supplied to it hereunder by or on behalf of Aventis exclusively to supply Product to Aventis and shall not use such Process or information or Raw Materials to supply any entity other than Aventis or its Affiliates with Product. Cedar may not delegate, transfer or sub-contract any of its duties and obligations hereunder without the prior written consent of Aventis. If Aventis consents to such a delegation, transfer or sub-contract, Cedar shall remain liable for all such duties and obligations so delegated, transferred or sub-contracted.
- 2.2 Cedar shall perform the manufacturing operations contemplated hereunder at the Plant.
- 2.3 Aventis shall provide reasonable technical assistance to Cedar during startup of the initial campaign.

Article 3. MATERIALS

3.1. Raw Materials

- (a) Aventis or its nominee shall be responsible for supplying Cedar, at Aventis' cost and delivered to the Plant, with such amounts of Raw Materials meeting the Raw Materials Specifications, as are requested by Cedar in writing during the term of this Agreement, which Cedar shall require in order to enable Cedar to produce, in campaigns scheduled in accordance with the provisions of Article 5, all quantities of Product ordered by

Aventis which have been the subject of a firm order as described in Article 5.1. Cedar shall provide Aventis with prior written notice three months in advance of the requested delivery date for any such Raw Materials.

- (b) The Raw Materials shall remain the property of Aventis until physically transformed into the Product and Cedar shall be responsible for paying Aventis the replacement cost of such Raw Materials if such Raw Materials are damaged after delivery to Cedar. Cedar shall reimburse Aventis for all of Aventis' costs in supplying Raw Materials to Cedar, if such Raw Materials are used by Cedar to produce Product, which due to Cedar's negligence or failure to follow the Process, does not meet the Specifications.
- (c) The Raw Materials remaining in the possession of Cedar on the effective date of termination or expiration of this Agreement shall, at Aventis' option, be returned to Aventis at Aventis' cost, unless such termination is a prior termination due to the condition or conduct of Cedar, in which case the cost shall be for Cedar.
- (d) If Cedar is able to obtain a more favorable price than Aventis for purchase of NaMO, following prior approval from Aventis, Cedar shall purchase and supply such quantities of NaMO as shall be required for it to perform hereunder and such NaMO shall be treated as a Non-Strategic Raw Material as described herein.

3.2. Non-Strategic Raw Materials

Cedar shall supply the Non-Strategic Raw Materials. In all cases, Cedar shall use a reasonable competitive purchasing process. Non-Strategic Raw Materials shall meet the Raw Materials Specifications given in Appendix 2. Cedar may not use Non-Strategic Raw Materials which do not meet the Raw Materials Specifications, unless Aventis has given its prior written consent.

3.3 Storage

Cedar shall maintain all inventories of Raw Materials, Non-Strategic Raw Materials and Product in good condition.

Article 4. MANUFACTURE

4.1. Production

Cedar shall, using the Process, manufacture Product which complies with the Specifications.

4.2. Specifications, Compliance

Cedar warrants that the Product shall be manufactured at all times in conformity with the Specifications and all applicable laws and regulations and registration requirements, and that all required records will be maintained in compliance therewith. Cedar warrants that the Product shall be free of any impurities resulting from the use of equipment used to manufacture Product for any other use (cross-contamination), unless Aventis has accepted such levels of impurities pursuant to Article 4.5(g) below. Cedar makes no other warranty with respect to Product hereunder, including warranties of merchantability or fitness for a particular purpose, and none shall be implied.

4.3. Retention of Samples and Records

Cedar shall maintain representative samples of the Product from each production batch for a minimum period of three (3) years. Upon request of Aventis, Cedar shall make available such retained samples to Aventis. Cedar shall also maintain production records which shall be accessible to Aventis for inspection in accordance with Article 4.4 below. Production reports shall be kept by production batch for three (3) years after production. Analytical reports of the annual production process shall be forwarded to Aventis upon its request.

4.4. Audits and Reports

On or before the 25th of each month during the term of the Agreement, Cedar shall provide Aventis with a report on the inventories, consumption and deliveries of Raw Materials and Non-Strategic Raw Materials and the manufacture, inventories and delivery of Product. Aventis shall have the right to make or have its independent auditors made an inventory audit (either physical or book inventory, or both) of the Product and Raw Materials and Non-Strategic Raw Materials, in progress and finished, from time to time, with advance notice to Cedar and at such time during Cedar's regular business hours as it may reasonably elect, and the auditors shall have access to Cedar's facilities and books and records which are relevant to this purpose. Aventis shall also have the right to audit or have audited, all invoices and documentation evidencing Cedar's costs for purchase of Non-Strategic Raw Materials.

4.5. Quality Control.

- (a) Cedar shall weigh and assay the Raw Materials sent to Cedar by Aventis for use in manufacturing the Product. Cedar's acceptance of Raw Materials delivered hereunder shall be a waiver by Cedar of claims with respect to deliveries which are damaged or do not conform to the Raw Materials Specifications unless Aventis receives notice of such a claim within thirty (30) days of delivery (or if such damage or non-conformity could not be discovered in the course of a reasonable incoming inspection, Cedar shall have the right to give notice within ninety (90) days of discovery thereof). Aventis shall replace such Raw Materials in a timely manner so as not to interfere with the production

of the Product and shall be responsible for the cost of returning the non-conforming Raw Materials to Aventis.

- (b) Cedar shall perform in-process quality control for the Product as set forth in the Process, which Process shall include a quality control plan. The quality control assays shall be done in accordance with laboratory practices as required by the EPA. Cedar may perform other types of quality control for the Product as it deems necessary and advisable. Aventis may, at its discretion, spot sample and analyse the Raw Materials, Non-Strategic Raw Materials and Product. Aventis may spot sample all batches during the first campaign.
- (c) For so long as Cedar's laboratories remain certified by Aventis, Aventis will accept and take delivery of the Product on the basis of Cedar's certificates of analysis for each batch which shall accompany such deliveries. Aventis' acceptance of Product delivered hereunder shall be a waiver by Aventis of claims with respect to deliveries which are damaged or do not conform to the Specifications unless Cedar receives notice of such a claim within thirty (30) days following receipt of certificates of analysis by Aventis (or if such damage or non-conformity could not be discovered in the course of a reasonable incoming inspection, Aventis shall have the right to give notice within ninety (90) days of discovery thereof).
- (d) Any dispute arising between the Parties as to whether a shipment lot of Product conforms with the Specifications shall be resolved by reference to the analytical methods identified in Appendix 3 ~~to be agreed by the Parties~~. If a shipment lot of Product manufactured hereunder is found not to conform with the Specifications, Cedar shall, at its expense, at the election of Aventis, either replace such non-conforming Product with conforming Product, reformulate the shipment lot to meet the Specifications, or reimburse Aventis for all of Aventis' costs relating to such Product. Should there be any disagreement between Cedar and Aventis, the Parties shall meet and negotiate in good faith and failing agreement within a period of ninety (90) days, either Party may submit the matter to the binding arbitration procedures described in Article 13 hereof.
- (e) Cedar shall inform Aventis of any unexpected deviation(s) from the operating conditions as they may have an adverse impact on the quality of the Product, even if the Product conforms to the Specifications. The Parties shall jointly examine the consequences of such deviation(s). Cedar shall not ship any such quantities of Product without the prior consent of Aventis.
- (f) Upon reasonable notice, Aventis shall have the right to have its authorised representative(s) present at the Plant to observe the manufacture of the Product and inspect the conditions of storage of the Product, Raw Materials and Non-Strategic Raw Materials. The presence of Aventis' representatives shall not relieve Cedar from any liability or of its duties or obligations under this Agreement.
- (g) Should Cedar wish to use any equipment involved in the manufacture of Product for any other production, Cedar shall identify and quantify for Aventis all resulting potential impurities in the Product which could thereby be introduced. Upon receipt of such information, Aventis will set the ARIL (Acceptable Residual Impurities Level), which Cedar shall thereupon be required to follow. If Cedar is prevented from

providing Aventis any of the information described above for valid reasons arising from its contractual commitments to another client, Cedar shall provide Aventis with a contact within the other client's organization so that Aventis may seek to obtain such information.

4.6. Handling and Storage

Cedar shall provide and maintain sufficient facilities for the safe storage of the Raw Materials, the Non-Strategic Raw Materials and the Product. Cedar shall provide Aventis with a completed receiving report form upon Aventis' request. Cedar shall preserve and protect the Raw Materials, Non-Strategic Raw Materials and the Products from contamination, loss, theft, substitution, damage, degradation or destruction and shall under no circumstances use the Raw Materials or Non-Strategic Raw Materials for any purpose other than manufacture of the Product.

4.7 Insurance

Cedar shall insure the Raw Materials, Non-Strategic Raw Materials, work-in-process, and the Product against loss, damage and the like, and shall ensure that it has insurance coverage sufficient to fully insure it against all liability which it might incur in the course of performance of this Agreement. At the request of Aventis, Cedar will provide Aventis with evidence that it has subscribed to the insurance policies contemplated hereby with a reputable insurance company acceptable to Aventis, which insurance policies shall in no way exonerate or reduce Cedar's liability hereunder.

Article 5. SCHEDULING, FEE

5.1 Scheduling

Aventis shall submit its good faith estimate of its orders for Product to be produced by Cedar in each calendar year during the term of the Agreement by no later than July 1 of the previous calendar year, provided that such estimate will be for the purpose of facilitating scheduling of manufacture only and will not be binding, provided that a firm order will be issued by Aventis by October 31 of such year, which order shall specify the delivery date(s) for the Product.

5.2 Manufacturing Fee

- (a) Cedar's manufacturing fee for production of Product for Aventis during the Initial Term as defined in Article 10.1 of this Agreement shall be \$8.00 per kilogram for all Product ordered. The fee set forth above includes all amounts relating to the depreciation of the Capital Improvements referred to in Article 6 below. Commencing with the calendar year 2002 and each calendar year thereafter, the fees set forth above may be adjusted to reflect increases in manufacturing costs according to the escalation formula set forth in Appendix 4 hereto.
- (b) Cedar shall invoice Aventis at the end of each month during the term of the Agreement for all quantities of Product delivered during such month, which deliveries shall be Ex Works Plant as such term is used in the Incoterms 2000, at the applicable manufacturing fee, and for all Non-Strategic Raw Materials (including NaMO if

purchased by Cedar pursuant to the terms hereof) purchased by Cedar hereunder and used to manufacture such quantities of Product. Such invoices shall be due and payable by Aventis thirty (30) days from date of invoice. Cedar shall load the Product into the carrier selected by Aventis.

5.3 Product

- (a) Aventis shall order and Cedar shall produce from Raw Materials supplied by Aventis not less than seven hundred ninety (790) metric tons of Product during the Initial Term as defined in Article 10.1 of this Agreement. For indicative purposes, Aventis' current estimate of its yearly requirements for the Product is one hundred fifty (150) metric tons per year, provided that such figure is provided for information purposes only and will not be binding.
- (b) ~~Aventis shall order and purchase eighty (80) metric tons of Product from Cedar by December 31, 2000, and shall order and purchase one hundred fifty two hundred thirty (230) metric tons of Product from Cedar by December 31, 2001.~~
- (c) In the event Aventis shall not have ordered and purchased from Cedar pursuant to the Agreement, at least one hundred and twelve (112) metric tons of Product during 2002 and in each calendar year of the Initial Term thereafter, then Aventis shall pay an amount equal to \$8.00 multiplied by the difference between one hundred and twelve (112) metric tons and the amount of Product ordered and purchased, provided however, that any such amounts paid by Aventis will be credited as a prepayment for any Product to be delivered in the following calendar year of the Initial Term in excess of one hundred and twelve (112) metric tons.

If during 2002 or any calendar year of the Initial Term thereafter, Aventis orders and purchases an amount of Product which exceeds one hundred and twelve (112) metric tons, such excess shall be credited towards, and shall thereby reduce, Aventis' commitment in respect of the one hundred and twelve (112) metric tons of Product for the following calendar year of the Initial Term, provided that the credit will be limited to twenty-eight (28) metric tons.

- (d) The Product shall be packaged and labelled by Cedar in accordance with the Specifications.

5.4 Raw Material Usage

Maximum usage factors applicable to consumption of Raw Materials (expressed in kilograms of Raw Materials consumed per kilogram of Product) and Non-Strategic Raw Materials (expressed in kilograms of Non-Strategic Raw Materials consumed per kilogram of Product) shall be determined by mutual agreement of the Parties based on actual results achieved during the first industrial production of Product by Cedar and shall be set forth in Appendix 5.

Thereafter, any over-consumption of Raw Materials or Non-Strategic Raw Materials (of more than 3.5%) shall be for Cedar's account. The savings on any under-consumption

of Raw Materials or Non-Strategic Raw Materials of more than 3.5% shall be shared equally by the Parties.

Within thirty (30) days of the end of each campaign during the Initial Term and any extension of the Initial Term, Cedar will prepare and provide Aventis with a statement of consumption of Raw Materials and Non-Strategic Raw Materials, accompanied by documentation demonstrating Cedar's costs for such Non-Strategic Raw Materials. Upon receipt thereof, Aventis will provide Cedar with a statement of its cost for such Raw Materials. Within thirty (30) days of receipt of such statement from Aventis, the Party owing compensation to the other Party pursuant to this Article 5.4 will pay the other Party all amounts so due. The Parties may, by mutual agreement, decide that any such amounts will be taken into account in the next invoice for Product delivered to Aventis.

5.5 Wastes

Cedar shall be solely responsible for disposal of all wastes (including without limitation, solid, liquid and hazardous materials and wastes, as the same may be defined by the EPA and any regulations issued pursuant to laws regulating the environment) generated in connection with the manufacturing operations contemplated hereby, and agrees to comply with all applicable laws, rules and regulations pertaining to the generation, storage, transport and disposal of such wastes. Cedar agrees to minimize the generation of wastes associated with manufacturing of the Product and shall recycle, use or dispose of such wastes in approved off-site facilities as directed from time to time by Aventis. Failure by Cedar to handle wastes in accordance with these provisions shall be deemed to be a material breach of this Agreement. Aventis shall reimburse Cedar for off-site waste disposal, provided that the waste disposal charge to Aventis shall not exceed \$ 1.25 per kilogram of Product, provided that in the event new governmental regulations are promulgated which prohibit Cedar from disposing of manufacturing wastes in the same manner as during the calendar year 2000, the Parties shall make their best efforts to reach agreement on a revised cap for off-site waste disposal costs per kilogram of Product. Cedar shall be solely responsible for any liability resulting from the violation of any environmental law as a result of Cedar's performance hereunder, and shall indemnify Aventis against any claims against Aventis or its Affiliates by any Third Party, including any public authority, in respect of any such violation.

Article 6. CAPITAL IMPROVEMENTS

As set forth in Appendix 1, Cedar's cost of Capital Improvements is \$ 751 000. This cost will be amortized over the first seven hundred ninety (790) metric tons of Product to be produced by Cedar and paid for by Aventis during the Initial Term of the Agreement. Accordingly, \$ 0.95 for each kilogram of Product purchased by Aventis from Cedar hereunder shall be credited to Aventis' obligation to reimburse Cedar's cost of Capital Improvements. If Cedar has not been totally reimbursed for this agreed cost of the Capital Improvements upon expiration of the Initial Term on December 31, 2006, Aventis shall be responsible for reimbursing Cedar the balance of this agreed cost by December 31, 2006. If this Agreement is terminated for reasons other than for default by Cedar prior to the end of the Initial Term,

the remaining portion of this agreed cost (to the extent incurred and unamortized) shall be paid in full by Aventis to Cedar upon the occurrence of such termination.

Article 7. TITLE AND RISK OF LOSS

Title to the Raw Materials supplied by Aventis to Cedar pursuant to this Agreement and to the Product manufactured by Cedar for Aventis pursuant to this Agreement shall at all times be in, and remain in, Aventis. Risk of loss, theft, degradation, substitution, contamination, destruction or damage of the Raw Materials, the Non-Strategic Raw Materials and the Product shall be borne by Cedar until delivered to Aventis as provided herein. Aventis shall bear the risk of loss, theft, degradation, substitution, contamination, destruction or damage to the Product after the Product is loaded onto the carrier designated by Aventis.

Article 8. CONFIDENTIALITY

- 8.1 Cedar shall keep secret and confidential all Process and Product information and other proprietary and technical information communicated in any form whatsoever by Aventis to Cedar from time to time in connection with this Agreement, and any information derived therefrom (collectively, the "Confidential Information"), and shall not disclose such Confidential Information, in whole or in part, to any Third Party. Cedar shall disclose the Confidential Information to its personnel on a strict need to know basis and shall not use the Confidential Information for any purpose other than the performance of the Agreement. This obligation of secrecy and non-use shall continue after the expiration or termination of this agreement for a period of 10 (ten) years.
- 8.2 The foregoing commitments shall not apply, however, to any part of such Confidential Information, which:
- (i) was known to the public or generally available to the public prior to the date of disclosure by Aventis,
 - (ii) becomes known to the public or generally available subsequently to the date of disclosure by Aventis through no act or failure to act on the part of Cedar or its Affiliates, or
 - (iii) Cedar can establish by adequate proof was received in good faith by Cedar from a Third Party having a bona fide right to disclose or make available such Confidential Information to Cedar.
- 8.3 The said Confidential Information shall not be deemed to be within one of the foregoing exceptions if it is merely embraced by more general information available in the public domain or in Cedar's possession. In addition, any combination of features shall not be deemed to be within the foregoing exceptions merely because the individual features are in the public domain or in Cedar's possession.

- 8.4 Cedar shall return promptly to Aventis, upon termination of the Agreement or upon Aventis' request, all of the Confidential Information and any documents, drawings, electronic media or other material containing or derived from the Confidential Information.
- 8.5 The contents of this Agreement may not be disclosed to any Third Party without the prior written consent of both Parties. Should a Party desire to make a communication to a Third Party or to the public regarding the transaction contemplated by the Agreement, such Party must first receive the prior written approval of the other Party.

Article 9. INDEMNIFICATION

9.1. Indemnification of Aventis.

Cedar shall defend, indemnify and hold harmless Aventis, its directors, officers, employees, agents and Affiliates, from and against all claims, actions, proceedings, demands and all liabilities, losses, damages, fines, penalties and expenses (including without limitation, reasonable attorney and consultant expenses) and all direct, special, indirect and consequential loss, damage or expense, whether or not made by a Third Party, which are caused by or arise out of, or in connection with (i) its manufacturing of the Product, including disposal of wastes therefrom ~~(provided such claims are not due to Aventis' negligence, fault, omission or conduct or Aventis' breach of any warranty made herein or of this Agreement)~~; (ii) storing or handling of the Raw Materials or Non-Strategic Raw Materials or the Product; or (iii) the negligent or intentional acts or omissions or the breach of any warranty or agreement made herein or of this Agreement by Cedar, its employees, agents or Affiliates, except to the extent that such claims are caused by Aventis' negligence, fault, omission or conduct or Aventis' breach of any warranty made herein or of this Agreement).

9.2. Indemnification of Cedar.

Aventis shall defend, indemnify and hold harmless Cedar, its directors, officers, employees, agents and Affiliates, from and against all claims, actions, proceedings and demands and all liabilities, losses, damages, fines, penalties and expenses (including without limitation, reasonable attorney and consultant expenses) and all direct, special, indirect and consequential loss, damage or expense, whether or not made by a Third Party, which are caused by or arise out of, or in connection with (i) ~~Aventis' the~~ transporting, storing, handling or use of Product after such Product has been delivered to Aventis, and (ii) the negligent or intentional acts or omissions or the breach of any warranty or agreement made herein or of this Agreement by Aventis, its employees, agents or Affiliates, except to the extent that such claims are caused by Cedar's negligence, fault, omission or conduct or Cedar's breach of any warranty made herein or of this Agreement).

Article 10. TERM AND TERMINATION

10.1. Term

The initial term of this Agreement (the "Initial Term") shall be from the Effective Date through December 31, 2006. Thereafter, the term of the Agreement shall be renewed for successive two year periods unless terminated by either Party upon notice to the other not less than one (1) year prior to the end of the Initial Term or one year prior to the end of any extension of the Initial Term of Agreement; provided that this Agreement shall not be so extended unless, prior to the end of the Initial Term or of any extended term, the Parties will have negotiated and reached mutual agreement in respect of the terms of such extension (including the price and quantity).

10.2. Prior Termination

- (a) Either Party may terminate this Agreement before the expiration of the Initial Term or the extended term by written notice to the other Party if:
 - (i) the other Party goes into bankruptcy or insolvency; or
 - (ii) the other Party (including any of its Affiliates) commits a material breach of its obligations under this Agreement and fails, within one month from notice of such breach to remedy the same (if capable of remedy) or (if incapable of remedy) to pay adequate compensation therefor.
- (b) Aventis shall have the right to terminate this Agreement by written notice with immediate effect if Cedar or any of its Affiliates uses the Confidential Information for purposes other than those specified herein.
- (c) Aventis shall have the right to terminate this Agreement immediately, with no further liability thereafter, except as provided in Article 6 of this Agreement, in the event that it decides to withdraw the Product from the market or if Aventis' business relating to the Product is sold or transferred to a Third Party.

10.3. Non-exclusive Remedy

The right of a Party to terminate this Agreement in the event of a breach hereof by the other shall not be an exclusive remedy for such breach, and such Party shall be entitled, in addition, to any damages or remedy available under applicable law.

10.4. Accrued Obligations

Neither the expiration nor any termination of this Agreement for whatever cause shall affect the rights or obligations of either Party which have accrued as of the date of such expiration or termination, nor shall it affect any rights or obligations of either Party

under this Agreement which are intended by the Parties to survive such expiration or termination.

Article 11. CONSEQUENCES OF TERMINATION

11.1. In the event of termination or expiration of this Agreement for any reason whatsoever, without prejudice to any legal or equitable rights or remedies of either Party, the following actions shall be taken:

- (a) Cedar shall immediately interrupt the manufacture of the Product and immediately return to Aventis the Confidential Information and all information relating to the Process and any other data or information it shall have received from Aventis during the term of this Agreement relating to the Product, or which is derived therefrom, and Cedar shall make no further use thereof without the written consent of Aventis.
- (b) The Parties shall continue to observe the provisions of Articles 4.3, 5.4, 8, 9, 11 and 13 hereto, which shall remain in full force and effect.
- (c) Aventis shall have the option, in its sole discretion, to purchase from Cedar, at the then applicable manufacturing fee, any inventory of Product in usable or merchantable condition.
- (d) Upon termination or expiration of this Agreement, Cedar will have no right to any compensation for cleaning or decontamination of its installations used to produce Product hereunder. Upon reasonable notice, Aventis shall have the right to have its representatives audit such cleaning or decontamination. The presence of any such representatives shall not relieve Cedar from any liability, duties or obligations in respect thereof.

Article 12. FORCE MAJEURE

- 12.1. Neither Party shall be liable for its delay in performing or failure to perform hereunder as a result of any contingency beyond its reasonable control, including but not limited to acts of God, fires, floods, wars, civil insurrection, sabotage, accidents, lockouts, labour disputes or shortages, any governmental laws, ordinances, rules, regulations, bans, action or inaction (such contingency herein referred to as a "Force Majeure").
- 12.2. The Party pleading circumstances of Force Majeure shall notify the other Party of the existence of such delay immediately and shall also notify the other Party as soon as the circumstances giving rise to such Force Majeure have abated. The Parties' obligations hereunder shall be suspended for the duration of any Force Majeure and shall resume upon termination of the Force Majeure, in accordance with the terms of this Agreement.

Article 13. ARBITRATION; APPLICABLE LAW

13.1. Method and Location

All disputes arising in connection with the present Agreement shall be finally settled under the rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules. The arbitration shall be conducted in the English language in New York City.

13.2 Applicable Law

This Agreement shall be construed in accordance with and governed by the laws of the State of New York.

Article 14. IMPROVEMENTS

14.1 The Parties hereby agree that nothing contained herein shall be construed as granting any right to Cedar relating to the Process and Product information or any other proprietary and technical information communicated by Aventis to Cedar other than for Cedar to manufacture Product for Aventis in accordance with the terms and conditions hereof.

14.2 Cedar shall immediately notify Aventis of any know-how, improvement or patentable discovery resulting from Cedar's performance under this Agreement. Any such know-how, improvement or patentable discovery shall be the exclusive property of Aventis, which may file for patent protection thereon in its own name and at its own cost. Cedar hereby assigns its rights on such know-how, improvements or patentable discoveries to Aventis and will cause its employees to do the same if necessary. At the request and expense of Aventis, Cedar will provide any assistance and information required by Aventis to file any such patent application.

Article 15. REGULATORY COMPLIANCE, PRODUCT INFORMATION

15.1 Cedar shall manufacture Product for and on behalf of Aventis in accordance with all applicable laws and regulations, including all applicable health, safety and environmental laws and regulations, and shall keep such records as may be required thereunder. Cedar acknowledges that it has inspected and tested the Process and affirms that it has all technical expertise necessary to: (i) install and operate the equipment described in the Process in a safe and sound manner; and (ii) use the Process to produce Product without causing damage to persons, equipment or the environment.

15.2 Cedar represents and warrants to Aventis that it has obtained all permits, authorizations and licenses necessary for its performance of the operations contemplated herein and the use of the Plant as contemplated hereby, and hereby agrees to comply with all provisions thereof and to maintain and obtain all renewals, reapplications and modifications of all permits, authorizations and licenses necessary or required for such operations.

- 15.3 Cedar shall ensure that its procedures and means meet appropriate regulatory requirements governing the handling, stocking, labeling and transport of Raw Materials, Non-Strategic Raw Materials and Product and shall observe any recommendations and instructions that Aventis shall communicate to Cedar in respect of the safe manufacture of the Product, handling and use of the Product and the Raw Materials and Non-Strategic Raw Materials, as well as health and protection of the environment.

Article 16. EXCLUSION OF AGENCY, RELATIONSHIP OF THE PARTIES

Each Party hereunder is an independent contractor and neither Party is ~~authorised~~ authorized or empowered to act as agent for the other Party for any purpose, and shall not on behalf of the other Party enter into any contract, undertaking or agreement of any sort or make any promise, warranty or representation.

Article 17. ASSIGNMENT

Neither Party may transfer or assign this Agreement to any Third Party without the prior written consent of the other Party.

Article 18. HEADINGS

The headings to the clauses of this Agreement are for the convenience of reference only, do not form part of this Agreement and shall not in any way affect the construction hereof.

Article 19. NOTICES

- 19.1. All notices or communications required or permitted to be given under this Agreement shall be in writing in English and shall be valid and sufficient if dispatched by personal delivery, by registered airmail, return receipt requested, or facsimile transmission, and shall be deemed to have been given or made when personally delivered, or when received as evidenced by return receipt or confirmation of facsimile transmission, and addressed to the respective addresses as first indicated herein, for the attention of _____ in the case of Aventis and _____ in the case of Cedar, with a copy to their respective legal departments.
- 19.2. Any Party may change its address by a notice given to the other Party in the manner set forth above. Notices given as herein provided shall be considered to have been given fourteen (14) days after the mailing thereof.

Article 20. AMENDMENTS; WAIVERS

No amendment of this Agreement or any provisions or terms thereof shall be binding unless recorded in a written document signed by both Parties. No delay, waiver, omission, or forbearance on the part of a Party to exercise any right, option, duty, or power arising out of any breach or default by the other Party under any of the terms, provisions, covenants, or conditions hereof, shall constitute a waiver by such Party to enforce any such right, option, duty, or power as against the other Party, or operate as a waiver of any subsequent breach or default by the other Party.

Article 21. ENTIRE AGREEMENT; SURVIVAL

This Agreement, including the Appendices hereto, sets forth the entire understanding and agreement between the Parties with respect to the subject matter hereof, and cancels and supersedes all previous agreements, promises, representations and understandings, written or oral, between the Parties with respect to the subject matter hereof, including the MOU.

Article 22. SEVERABILITY

If any provision(s) of this Agreement shall, to any extent, be held to be invalid, illegal or unenforceable in any given jurisdiction, or any governmental agency or authority shall require the Parties to delete any provision of this Agreement as a condition of validity, legality or enforceability of the remainder of this Agreement in any given jurisdiction, such invalidity, illegality, unenforceability or deletion shall not impair or affect the remaining provisions of this Agreement or the validity or enforceability of such provision in any other jurisdiction. The Parties shall endeavor through good faith negotiations to replace the invalid, illegal, unenforceable or deleted provision by valid provisions the economic effect of which comes as close as legally possible to that of the invalid, illegal, unenforceable or deleted provision.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their duly authorised representatives on the day and year set forth below.

**AVENTIS CROPSCIENCE
MATIERES ACTIVES**

**CEDAR CHEMICAL
CORPORATION**

By: _____

Name:

Title:

Date:

By: _____

Name:

Title:

Date:

- Appendix 1 **Capital Improvements**
- Appendix 2 **Raw Material Specifications**
- Appendix 3 **Product Specifications**
- Appendix 4 **Escalation Formula**
- Appendix 5 **Maximum Usage Factors**

Appendix 1 Capital Improvements

Cost Estimate Summary : Cyclanilide Campaign

	Labor	Material	Total
• 1.0 Site work			
Subtotal	\$ 8 400,00	\$ 1 000,00	\$ 9 400,00
• 2.0 Civil			
Subtotal	\$ 23 275,00	\$ 11 500,00	\$ 34 775,00
• 3.0 Reactors (Coiled/ Jacketed)			
Subtotal	\$ 25 550,00	\$ 27 600,00	\$ 53 150,00
• 4.0 Vessels/Tanks			
Subtotal	\$ 5 600,00	\$ 10 000,00	\$ 15 600,00
• 5.0 Heat exchangers			
Subtotal	\$ 1 750,00	\$ 18 000,00	\$ 19 750,00
• 6.0 Rotating Equipment			
Subtotal	\$ 6 300,00	\$ 31 000,00	\$ 37 300,00
• 7.0 Filtering Equipment			
Subtotal	\$ 700,00	\$ 6 000,00	\$ 6 700,00
• 8.0 Piping			
Subtotal	\$ 107 940,00	\$ 91 917,50	\$ 199 857,50
• 9.0 Electric/ Instrumentation			

	Labor	Material	Total
Subtotal	\$ 104 860,00	\$ 158 750,00	\$ 263 610,00
• 10.0 Inspection/ Engineering			
Subtotal	\$ 35 000,00	\$ 0,00	\$ 35 000,00
• 11.0 Rentals & 12.0 Miscellaneous			
Subtotal	\$ 840,00	\$ 6 500,00	\$ 7 340,00
SUBTOTAL	\$ 320 215,00	\$ 362 267,50	\$ 682 482,50
Contingency (10 %)	\$ 32 021,50	\$ 36 226,75	\$ 68 248,25
TOTAL	\$ 352 236,50	\$ 398 494,25	\$ 751 000,00

Appendix 2

Raw Material Specifications

a) 2,4 Di Chloraniline Specifications (For Cyclanilide)

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications (g/Kg)	Frequency
• Appearance	Visual	Molten product colourless to brown	each batch
• Solidification point		60° C min.	each batch
• Purity	Gas chromatography	990 min.	each batch
• Water	Karl Fischer	1 max.	each batch
Process Impurities			
- 2,5 Di chloraniline	Gas chrom.	2 max.	each batch
- 2,6 Di chloraniline	Gas chrom.	1 max.	each batch
- 3,4 Di chloraniline	Gas chrom.	1 max.	each batch
- Others impurities (sum)	Gas chrom.	3 max. (1 max for each)	each batch
- Chlorides		100 ppm max.	

2. PACKAGING

- Steel drum for liquid product.

b) CDM Specifications

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications
• Purity	GC / MS	min. 97,50 %
• Dimethylmalonate	GC / MS	max. 1,00 %
• Dimethylformamide	GC / MS	max. 0,75 %

c) Sodium Methylate Specifications Solution 30 % in Methanol

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications
• Total alkalinity calculated as : NaOCH ₃	Titration	29,5 % - 31,0 % 29,5 % - 30,5 %
NaOCH ₃ content	Titration	Max 0,5 %
• Na ₂ CO ₃ + NaOH content	ISO 6271	Max 30 APHA
• Color		

Appendix 3 Product Specifications

Cyclanilide Specifications

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications (g/Kg)	Frequency
• Appearance	Visual	White to yellowish flowing powder	each batch
• CYCLANILIDE content	C.817.06.95	960 min.	each batch
• Water	CIPAC MT 30.1	5 max.	each batch
• Total alkyl aromatics : as o, p, m xylène, and ethyl benzene	C.816.06.95	1 max.	each batch
Process Impurities :			
- RPA 116741 (imp.A)	C.821.07.95	3 max.	each batch
- 2,4 Dichloroaniline	C.821.07.95	1 max.	each batch
- RPA 090 945	C.821.07.95	10 max.	each batch
- RPA 111 030	C.821.07.95	10 max.	each batch
- RPA 114 924	C.821.07.95	15 max.	each batch
- RPA 093 903	C.821.07.95	1 max.	each batch
- RPA 090 899	C.821.07.95	1 max.	each batch

Cross contamination prevention :

All possible impurities from the implementation of an other production in the equipment involved in manufacturing of Cyclanilide, must be identified and quantified.

2. PACKAGING

- Polyéthylène drums : 120 l.
- Net weight : 50 Kg of Cyclanilide

Appendix 4 Escalation Formula

Application commencing in 2002

$$P_{n+1} = P_n \left[0,15 + 0,425 \frac{W_{n+1}}{W_n} + 0,425 \frac{PPI_{n+1}}{PPI_n} \right]$$

- P_{n+1} = Adjusted toll fee for the contract year in \$ / Kg of Cyclanilide.
- P_n = Toll fee of the previous contract year in \$ / Kg of Cyclanilide.
- W_{n+1} = Employment Cost Index published by the US Bureau of Labor Statistic available the month of December preceding the date of adjustment.
- W_n = Employment Cost Index of the previous contract year.
- PPI_{n+1} = Producer Price Index, for the available month of December preceding the date of adjustment :
 - Industry and Product : Industrial Organic Chemical, Code 286.
 - Subcategory : Agricultural Chemical, nbc, other pesticidal preparations primarily for agricultural, Code 2879 – 8.
- PPI_n = Producer Price Index of the previous contract year.

Assignment & Assumption Agreement
w/ Rhone-Poulenc AG

AVENTIS/RHONE POULENC 11/19/1999
Secrecy Agreement Cyclanilide



ASSIGNMENT AND ASSUMPTION AGREEMENT

THIS ASSIGNMENT AND ASSUMPTION AGREEMENT (the "Agreement") is entered into effective as of June 1, 1997, by and between Cedar Chemical Corporation, a Delaware corporation, ("Cedar") and Rhone-Poulenc Ag Company, a Delaware corporation, ("RPAC").

W I T N E S S E T H:

WHEREAS, Cedar and Micro Flo Company, a Georgia corporation, ("Micro Flo") have entered into a Supply Agreement, a true and correct copy of which is attached hereto as Exhibit A (the "Supply Agreement") pursuant to which Cedar is obligated to supply and Micro Flo is obligated to purchase certain quantities of Ethephon (hereinafter "Product") in accordance with the terms and conditions of the Supply Agreement; and

WHEREAS, Cedar has entered into a Memorandum of Understanding with Rhone Poulenc Agrochimie SA, a French corporation, (hereinafter "RPA"), pursuant to which Cedar expects to enter into a definitive agreement to produce certain products for RPA for an extended term (hereinafter referred to as the "Term"), subject, however, to Cedar's being relieved by Micro Flo of its obligations under the Supply Agreement in accordance with the terms hereof; and

WHEREAS, RPAC desires to assume and perform Cedar's obligations under the Supply Agreement with Micro Flo in accordance with the terms and conditions hereof.

NOW, THEREFORE, in consideration of the premises and the mutual covenants set forth herein, the parties agree as follows:

1. Assignment. Subject to the provisions of Paragraph 3 of this Agreement, Cedar hereby assigns to RPAC its entire right, interest and obligations in and under the Supply Agreement effective as of the date first above appearing (the "Effective Date") and continuing thereafter throughout the Term referred to herein, but in any event through October 1997.

2. Assumption. As of the Effective Date, subject to the provisions of Paragraph 3 of this Agreement, RPAC assumes and agrees to perform Cedar's obligations under the Supply Agreement throughout the Term referred to herein, but in any event through October 1997.

3. Inventory. Cedar's entire inventory of Product (the "Inventory") totalling approximately 328,000 pounds on a 100% active ingredient basis as of the Effective Date hereof will be sold to Micro Flo at a price of \$3.63 per pound (the "Purchase Price") by not later than October 1997. The exact quantity of Cedar's Inventory sold to Micro Flo shall be certified to RPAC by Cedar on or before November 15, 1997, which quantity shall be subject to verification and audit by RPAC at its expense. In the event Micro Flo's Net Selling Price (as defined in the Supply Agreement) for the period April through October 1997 shall exceed \$31.00 per pound, RPAC shall sell direct Micro Flo to pay to Cedar such increase in the Purchase Price for that quantity of Inventory sold by Cedar to Micro Flo, as aforesaid, determined in accordance with the schedule set forth on Exhibit B to the Supply Agreement. RPAC shall cause such sum to be paid to Cedar within fifteen (15)

days of the date of determination of the adjusted Purchase Price in accordance with the terms of the Supply Agreement.

4. Commissions. RPAC shall pay to Cedar a commission of \$1.35 per pound for all quantities of Product sold by RPAC to Micro Flo up to 1,250,000 pounds in each calendar year during the Term hereof; provided that, for the 1997 calendar year, Cedar's commissions shall be payable with respect to all quantities of Product sold by RPAC to Micro Flo in said calendar year; provided further that, in said calendar year, RPAC shall pay commissions determined hereunder on no less than 1,250,000 pounds of Product less the number of pounds of Product in Cedar's Inventory sold by Cedar to Micro Flo, as determined in accordance with Paragraph 3 of this Agreement. Commissions hereunder shall be payable to Cedar sixty (60) days from the date of each such shipment to Micro Flo. Any payment required by RPAC in order for its commissions payable for the calendar year 1997 to total the minimum commissions payable in said year, as aforesaid, shall be due and payable to Cedar the 1st day of March, 1998. Cedar's said commission on sales of Product sold to Micro flo in each calendar year during the Term referred to herein shall be increased by the amount by which the price of Product sold by RPAC to Micro Flo shall exceed \$3.63 per pound, as determined under Paragraph 4 of the Supply Agreement, such additional commissions, if any, to be due and payable by RPAC to Cedar within fifteen (15) days following the determination of Micro Flo's Final Net Selling Price under the Supply Agreement in each calendar year during the Term referred to herein. It is understood

that, subject to Cedar and RPA entering into one or more agreements as contemplated under the MOU, this Agreement shall be amended to suspend RPAC's obligation to pay commissions on sales of Micro Flo under the Supply Agreement during each calendar year during the Term hereof following the 1997 calendar year.

5. Reassignment. In the event of the expiration or termination of the Term of Cedar's anticipated contract with RPA prior to December 31, 2006, or, if Cedar and RPA shall not have entered into such a contract by October 31, 1997, RPA shall, immediately upon notice by Cedar, reassign to Cedar its entire right, interest and obligations under the Supply Agreement, and, in that event, Cedar shall reassume and perform all of its obligations thereunder from and after the date of such reassignment, whereupon Cedar's rights and RPAC's obligations under this Agreement shall terminate except for such rights and obligations as shall have accrued as of the Effective Date of such reassignment.

6. Condition Precedent. This Agreement shall be effective only upon Micro Flo's execution and delivery to Cedar and RPAC of the Consent Agreement in the form attached hereto as Exhibit B.

7. Warranties and Covenants.

A. RPAC warrants and covenants as follows:

(1) It has full power and authority to execute and deliver this Agreement and to perform its obligations hereunder. This Agreement constitutes the valid and legally binding obligation of RPAC, enforceable in accordance with its terms.

conditions with respect thereto which are not set forth in said Exhibit A.

8. Indemnification by RPAC. RPAC shall indemnify, defend, and hold harmless Cedar against and in respect of any and all claims, demands, losses, costs, expenses, obligations, liabilities, damages, recoveries, and deficiencies, including reasonable attorney's fees (collectively "Damages"), that Cedar incurs or suffers, which arise, result from, or relate to, any breach of, or failure by RPAC to perform, any of its representations, warranties, covenants or agreements set forth herein.

9. Indemnification by Cedar. Cedar shall indemnify, defend, and hold harmless RPAC against and in respect of any and all claims, demands, losses, costs, expenses, obligations, liabilities, damages, recoveries, and deficiencies, including reasonable attorney's fees (collectively "Damages"), that RPAC incurs or suffers, which arise, result from, or relate to, any breach of, or failure by Cedar to perform, any of its representations, warranties, covenants or agreements set forth herein.

10. Miscellaneous:

A. Survival. All of the representations and warranties of the parties contained in Paragraph 7 of this Agreement shall survive the Effective Date indefinitely.

B. Entire Agreement, Amendments. This Agreement constitutes the entire agreement between the parties and supersedes

(2) Neither the execution and delivery of this Agreement nor the consummation of the transactions contemplated hereby will violate any provision of RPAC's Charter or By-Laws nor conflict with, result in a breach of, constitute a default under, or require any notice under any agreement to which RPAC is a party or by which it is bound.

(3) It will comply fully with the terms of the Supply Agreement assumed by it hereunder, and it will not during the Term hereof enter into any amendment of the Supply Agreement nor otherwise alter or assign the Supply Agreement without Cedar's prior written consent.

B. Cedar warrants and covenants as follows:

(1) It has full power and authority to execute and deliver this Agreement and to perform its obligations hereunder. This Agreement constitutes the valid and legally binding obligation of Cedar, enforceable in accordance with its Terms.

(2) Neither the execution and delivery of this Agreement nor the consummation of the transactions contemplated hereby will violate any provision of Cedar's Charter or By-Laws nor conflict with, result in a breach of, constitute a default under, or require any notice under any agreement to which Cedar is a party or by which it is bound.

(3) The Supply Agreement attached hereto as Exhibit A is in full force and effect; neither Cedar nor Micro Flo is in default of the terms thereof; and there are no terms or

any prior understandings, agreements, or representations by or between the parties, written or oral, to the extent they relate in any way to the subject matter hereof. No amendment of any provision of this Agreement shall be valid unless the same shall be in writing and signed by RPAC and Cedar.

C. Succession and Assignment. This Agreement shall be binding upon and inure to the benefit of the parties named herein and their respective successors and permitted assigns. No party may assign either this Agreement or any of its rights, interest, or obligations hereunder without the prior written approval of the other party.

D. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original but all of which together will constitute one and the same instrument.

E. Headings. The section headings contained in this Agreement are inserted for convenience only and shall not affect in any way the meaning or interpretation of this Agreement.

F. Notices. All notices, requests, demands, claims, and other communications hereunder will be in writing. Any notice, request, demand, claim, or other communication hereunder shall be deemed duly given if it is sent by registered or certified mail, return receipt requested, postage prepaid (and then two business days after), or if it is sent by a nationally-recognized overnight courier service (and then one business day after), and addressed to the intended recipient as set forth below:

If to Cedar:

J. Randal Tomblin
President, Organics
Division
Cedar Chemical Corporation
24th Floor, Clark Tower
5100 Poplar Avenue
Memphis, TN 38137

If to RPAC:

G. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware, without giving effect to any choice or conflict of law provision or rule.

H. Severability. Any germ or provision of this Agreement that is invalid or unenforceable in any situation in any jurisdiction shall not affect the validity or enforceability of the remaining terms and provisions hereof or the validity or enforceability of the offending term or provision in any other situation or in any other jurisdiction.

EXECUTED by the parties as of the effective date hereof.

ATTEST:

CEDAR CHEMICAL CORPORATION

John Bonpane

BY:

J. Randal Tomblin

J.C.

RHONE-POULENC AG COMPANY

BY:

[Signature]



5100 Poplar Avenue • Suite 2414 • Memphis, TN 38137 • (901) 685-5348 • Fax (901) 684-5398

J. Randal Tomblin
President and CEO

November 27, 2000

Mr. Jeffrey A. Sorrell
Manager, Sales, Operations &
Inventory Planning
SEDAGRI
2 T.W. Alexander Drive
Research Triangle Park, NC 27709

Re: Ethephon

Dear Jeff:

Enclosed please find two fully executed copies of the Ethephon Agreement. Please have someone in your organization execute on behalf of Aventis CropScience USA LP and return one copy for my files.

As always, I appreciate your diligence in this matter and wish you a great holiday season. I've enjoyed working with you on ethephon over the years and look forward to a similar relationship on cyclanilid.

As confirmed to you via telephone, we have received the payment.

Kindest regards,

Randal Tomblin
Randal Tomblin

cc: John Wichtrich

AGREEMENT

THIS AGREEMENT entered into as of the 15th day of November, 2000, by and between Aventis CropScience USA LP ("Aventis"), successor to Rhone Poulenc Ag Company ("R-P") and Cedar Chemical Corporation ("Cedar").

WHEREAS, R-P and Cedar entered into an Assignment and Assumption Agreement dated as of June 1, 1997, (the "Agreement") pursuant to which Cedar assigned to R-P its rights and obligations under that certain Ethephon Supply Agreement between Cedar and MicroFlo Company dated as of January 1, 1996, as amended by Amendment Agreement dated February 18, 1997, and Aventis assumed Cedar's obligations under the Ethephon Supply Agreement and agreed to pay Cedar certain commissions in connection with its performance thereunder; and

WHEREAS, Aventis desires to purchase from Cedar, and prepay Cedar's rights to receive commissions pursuant to the Agreement, and Cedar is willing to accept such prepayment in accordance with the terms and conditions hereof.

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, the parties agree as follows:

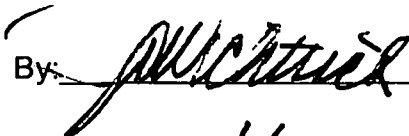
1. Aventis shall pay to Cedar the sum of Six Million Dollars (\$6,000,000) on or before December 15, 2000, which payment shall be made by check payable to Cedar for delivery to Cedar's office in Memphis, Tennessee to the attention to J. Randal Tomblin, President, via Federal Express, on the first business day following the full execution of this Agreement and delivery of same to Aventis.

2. Cedar agrees to accept the payment referred to in paragraph 1 of this Agreement in full satisfaction of its rights under the Agreement, including its right to receive commissions thereunder and its right to require that the Ethephon Supply Agreement be reassigned to Cedar in accordance with the terms of the Agreement, and will release R-P and Aventis from all remaining obligations to Cedar under the Agreement accruing on or after the date on which Cedar receives such payment.

3. The undersigned signatories represent that they are duly authorized to execute this Agreement on behalf of the respective parties hereto and that the Agreement, when so executed, shall be binding and enforceable as to said parties and their respective successors and assigns.

EXECUTED as of the date first above appearing.

AVENTIS CROPSOURCE USA LP

By: 

Title: VP/CM

Date: 12/6/00

CEDAR CHEMICAL CORPORATION

By: 

Title: President + CEO

Date: Nov 27, 2000

CONFIDENTIAL**ETHEPHON SUPPLY AGREEMENT**

THIS AGREEMENT, made and entered into as of the first day of January, 1996, by and between **CEDAR CHEMICAL CORPORATION**, a Delaware corporation, with offices at 5100 Poplar Avenue, Suite 2414, Memphis, Tennessee 38137 (hereinafter "Cedar"), and **MICRO FLO COMPANY**, a Georgia corporation, with its principal office located at 5925 Imperial Parkway, Suite 130, Mulberry, Florida 33860 (hereinafter "Micro Flo").

WHEREAS, Cedar presently possesses both technical and end use registrations for the active ingredient Ethephon (hereinafter collectively "Product") from the U.S. Environmental Protection Administration (E.P.A.); and,

WHEREAS, Micro Flo also possess both technical and end use registrations for the Product issued by the E.P.A.; and

WHEREAS, Cedar plans to begin production of the Product at its plant located at West Helena, Arkansas no later than December 31, 1996; and

WHEREAS, Micro Flo desires to purchase from Cedar and Cedar desires to sell on an exclusive basis to Micro Flo during the term of this Agreement certain quantities of Product meeting the specifications attached hereto as Exhibit "A" required by Micro Flo in connection with the production and sale of the Product by Micro Flo in NAFTA countries, all at the price and quantities and in accordance with the terms and conditions contained herein.

NOW, THEREFORE, it is hereby agreed:

1. **TERM.** The term of this Agreement shall be from the date first above written through December 31, 2002, and will automatically be extended for one year increments

from year to year until terminated by either party with at least twelve (12) months written notice in advance of expiration of the initial or renewed term.

2. QUANTITIES. In only the first year of the Agreement (1996), Cedar shall sell to Micro Flo and Micro Flo shall purchase from Cedar a maximum of 300,000 pounds of Product on a 100% Active Ingredient (AI) basis that has been manufactured in the Peoples Republic of China ("China") and shall meet the specifications in Exhibit "A". Micro Flo shall have no obligation with respect to such purchase if Cedar fails to make delivery as scheduled by June 30, 1996, or if the Product fails to meet specifications in any respect.

Beginning the second year of the Agreement (1997) and in each of the remaining contract years, Cedar shall sell to Micro Flo, and Micro Flo shall purchase from Cedar, a minimum of 1,250,000 pounds of Product on an AI basis and Cedar shall sell to Micro Flo and Micro Flo shall purchase from Cedar fifty (50%) percent of Micro Flo's annual requirement in excess of 2,500,000 pounds 100% AI.

The parties recognize that Cedar is presently constructing its manufacturing plant. Except for the 300,000 pounds of Product (AI) that is manufactured in China for 1996, all Product shall be manufactured by Cedar in Cedar's manufacturing facility in West Helena, Arkansas. If Cedar does not have its plant in operation by December 31, 1996, then either party may terminate this Agreement, after which time neither party shall have any claims for damages from the other party.

ON LINE
REAL
CAPAC

3. CEDAR REGISTRATIONS. Upon execution of this Agreement, Cedar shall cancel its E.P.A. registration #'s 56077-50 and 56077-51 for Technical Ethephon and Cedar shall transfer to Micro Flo all of Cedar's rights, title and interest in and to Cedar's End Use Label E.P.A. registration #56077-49, which is marketed under the trade name "Pluck". Such transfer shall be executed in accordance with 40 C.F.R. §152.135, and both Cedar and Micro Flo shall execute and deliver such documents and shall take such additional actions as may be necessary to effectuate such transfer. Consequently, Cedar will supply Micro Flo

★
HAS THIS
HAPPENED?

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under Micro Flo's E.P.A. Technical Ethephon registration. The sole consideration for such transfer shall be the execution of this Supply Agreement by Micro Flo.

4. PRICE. In the first contract year, the initial billing price for the Product will be \$4.09 per pound (AJ), F.O.B. Cedar's West Helena, Arkansas manufacturing plant. Payment terms on invoices for all Product will be due and payable sixty (60) days from the date of shipment.

No later than January 15th of each contract year, or thirty (30) days after notification from Micro Flo of Micro Flo's Final Net Selling Price ("NSP") of Ethephon 6, whichever date is later, an adjustment in the price of Product shall be made, if necessary, said adjustment to be based on Micro Flo's NSP defined as Micro Flo's average invoice price to its customers, less any rebates, freight and warehouse allowances, adjustments, and free goods, sold during the immediately preceding period from April through October. The final price due from Micro Flo shall be based on the attached Exhibit "B". Payment of the adjustment by Micro Flo to Cedar or by Cedar to Micro Flo will be made within fifteen (15) days of the determination of the adjustment amount. The final adjusted price of Product for any given year will be the initial billing price for the next contract year, said price to once again be subject to the same adjustment as specified in the first contract year.

Beginning in the second full year of production, and each year thereafter, the price of Product will be increased or decreased to reflect the actual documented increase or decrease in the direct cost of the raw materials on Exhibit "C", said Product price increase not to exceed 5% of the prior year's adjusted price.

Upon thirty (30) days written notice either party shall have the right to audit the other party's books at their principal place of business to confirm Micro Flo's NSP or Cedar's increase or decrease in raw material costs, said audit to be at the expense of the requesting party.

5. HARDSHIP. In the event that Micro Flo's NSP for Ethephon 6 in any contract year is less than \$32.00 per gallon, Micro Flo and Cedar agree to negotiate equitable changes.

If Micro Flo and Cedar are unable to reach agreement on pricing, then either party will be relieved of any further obligation to sell or purchase the Product at the end of the current contract year.

6. DELIVERIES. In the first year of the Agreement, with respect to the 300,000 pounds (AI) of Product manufactured in China, which shall meet the specifications in Exhibit "A", to be purchased by Micro Flo, the delivery of the entire 300,000 pounds is to be made by June 30, 1996.

In each of the remaining years of the Agreement, with respect to the minimum of 1,250,000 pounds of the AI of the Product to be purchased by Micro Flo during each remaining contract year, the delivery schedule shall be as follows:

- (a) 250,000 pounds by May 15
- (b) 250,000 pounds by June 15
- (c) 250,000 pounds by July 15
- (d) 250,000 pounds by August 15
- (e) 250,000 pounds by September 15

*Invoice
15th 1/2*

The earliest shipment of the Product with respect to a particular contract year shall not be delivered prior to April 15 and the entire minimum of 1,250,000 pounds of the Product shall be delivered no later than September 15.

Micro Flo and Cedar will meet in the 4th quarter of each year to discuss Micro Flo's requirement for the next contract year and agree upon any quantity of Product that may be available in excess of Micro Flo's requirement, said excess quantity to be sold only by Micro Flo. Cedar or its affiliates shall not sell, manufacture or license Product, including any variation or improvement thereof, to or for any other party, for sale or use in NAFTA countries, without Micro Flo's expressed written consent. Prior to December 31 of each Contract Year, Micro Flo shall provide its best estimate of the quantity of Product it intends to purchase during the Contract Year beginning January 1, including such excess

quantity, in approximately equal amounts during the period April through September of that year.

Micro Flo shall be entitled to alter its purchase quantity upon sixty (60) days written notice prior to any scheduled production, but in no event will Micro Flo's total quantity fall below the requirements outlined in Section 2 above. Cedar agrees that it will make its best efforts to supply any additional quantity of Product that Micro Flo requests.

Time is of the essence with regard to all delivery dates. Micro Flo reserves the right to inspect and, as applicable, reject deliveries which do not conform to specifications.

7. WARRANTY. Cedar warrants title to the product sold hereunder, and that the Product shall meet the specifications set forth in Exhibit "A" and shall be free of defects or impurities, except for those within the range of tolerance set forth in the specifications in Exhibit "A", and shall be produced in compliance with all applicable federal, state, and local laws, ordinances, rules, regulations, and executive orders. CEDAR MAKES NO OTHER REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, WHETHER TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR AS TO ANY OTHER MATTER.

8. INDEMNIFICATION. Micro Flo agrees to indemnify Cedar and hold it harmless from and against any loss, liability, damage, expenses, costs, and fees (including reasonable attorneys fees), which Cedar may suffer as a result of any claim or cause of action asserted against Cedar arising out of or in any way connected with the use, handling, storage or transportation of the Product sold hereunder after such Product has been delivered to Micro Flo or its designees in accordance with Micro Flo's instructions pursuant to this Agreement.

Cedar agrees to indemnify and hold Micro Flo harmless from and against any loss, liability, damage, expenses, costs, and fees (including reasonable attorney's fees), based upon or arising out of or in any way connected with the production, handling, storage or transportation of the Product before such Product has been delivered to Micro Flo or its

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designees, as well as Cedar's breach of its warranties hereunder, Cedar's breach of this Agreement or Cedar's violation of any law or regulations, including without limitation, FIFRA, relating to any of the Ethephon supplied or manufactured by Cedar and purchased by Micro Flo. This Agreement provides for the sale of Product by Cedar to Micro Flo and is not a specification of activities or of production to be carried on by Cedar all of which shall be under Cedar's discretion and control, and shall be Cedar's sole responsibility.

9. FORCE MAJEURE. Each of the parties hereto shall be excused from performing its obligations hereunder due to any act of God, fire, casualty, flood, war, strike, lock out, failure of public utilities, injunction, any act, exercise, assertion, or requirement of governmental authority, epidemic, destruction of production facilities, insurrection, raw material shortages, labor, equipment, transportation or energy sufficient to meet manufacturing needs, customer boycotts or market limitation, or any other cause beyond the reasonable control of the party invoking this provision, provided that prompt notice thereof be given to the other party, and provided further that prompt and reasonable efforts are made to overcome such event or condition causing such inability to perform.

10. APPLICABLE LAW. The Agreement shall be construed and interpreted in accordance with the laws of the State of Georgia.

11. NOTICES. Any notice required hereunder shall be mailed, postage prepaid, by registered or certified mail, return receipt requested, or by overnight courier service, in either case with a copy transmitted by same day facsimile transmission, addressed to the receiving party at the following address:

For Cedar: Craig Keese, Vice President
Cedar Chemical Corporation
Clark Tower, Suite 2414
5100 Poplar Avenue
Memphis, TN 38137

For Micro Flo: Keith Hobbs, Vice President
Micro Flo Company
5925 Imperial Parkway, Suite 130
Mulberry, FL 33860

Either party, may by notice to the other, change its address for receiving such notice or the designee to receive such notice.

12. DEFAULT AND DISPUTE RESOLUTION. Any dispute which arises out of this Agreement shall be resolved between the parties if at all possible. If the parties can not resolve such dispute within thirty (30) days after the dispute arises or such other period of time to which both parties agree, then the dispute shall be referred for arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association. The decision of the arbitrator shall be binding, and judgment upon any award rendered by the arbitrator may be entered in any court having jurisdiction thereof.

13. NON-ASSIGNABILITY. Neither party may assign its rights or obligations under this Agreement without the written consent of the non-assigning party except that the assigning party (the "Seller") may assign its rights and obligations to any purchaser of all or substantially all of the assets and the business of Seller, provided that the purchaser of the assets and the business shall be obligated to assume the obligations of the Seller.

14. WAIVER. The waiver by either party of a breach or a default of any provision of this Agreement by the other party shall not be construed as a waiver of any succeeding breach of the same or of any other provision, nor shall any delay or omission on the part of either party to exercise or avail itself of any right, power, or privilege that it has, or may have hereunder, operate as a waiver of any right, power, or privilege by such party.

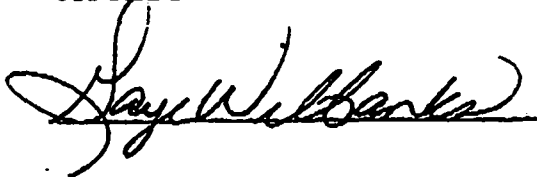
15. NO AGENCY. Nothing in this Agreement shall be deemed to constitute either party as an agent, joint venturer, partner or representative of the other party.

16. TERMINATION. Either party may terminate this Agreement for failure of the other party to comply with the terms and conditions hereof effective not earlier than thirty (30) days following notice to such party setting out the full particulars of the alleged breach, provided that such breach remains uncured at the end of the thirty (30) day period.

17. ENTIRE AGREEMENT. There is no right or obligation of either party expressed or implied except as expressly set forth in this Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their respective duly authorized officers on the day and year first above written.

ATTEST:




CEDAR CHEMICAL CORPORATION

By: 

ATTEST:



MICRO FLO COMPANY

By: 

VP OF FINANCE

ETHEPHON 65% MUP

PRODUCT SPECIFICATIONS

CHEMICAL:

<u>COMPONENT</u>	<u>INGREDIENT CERTIFIED LIMITS - % W/W</u>		
	<u>Lower Limit</u>	<u>Nominal Limit</u>	<u>Upper Limit</u>
Ethephon (2-chloroethyl phosphonic acid)	63.500	65.500	70.000
Phosphoric acid	0.200	0.500	0.800
Phosphonic acid	0.200	0.400	0.800
(2-chloroethyl) Phosphonic acid mono-(2-chloroethyl) ester	0.000	0.100	0.200
2-Chloroethanol	0.003	0.004	0.006
Water	25.500	27.300	28.100
Other Related Hydrogenated Phosphorochloride Impurities	5.1	<u>6.196</u> 100.00 %	7.3

PHYSICAL:

COLOR	Colorless to slight yellow liquid with no visible particulates.
ODOR	Slight hydrochloric acid scent.
BOILING POINT	100 degrees Celsius @ 760 mm Hg.
SPECIFIC GRAVITY	1.35 - 1.40 g/ml @ 25 degrees Celsius.
pH	1.25 - 1.45 @ 25 degrees Celsius.
SOLUBILITY	> 200g/100 ml of water @ 25 degrees Celsius. > 200 g/100 ml of methanol @ 25 degrees Celsius. 3 g/100 ml of chloroform.
VAPOR PRESSURE	$< 1 \times 10^{-7}$ torr
DISSOCIATION CONSTANT	pK = 1.9 and 6.9 for pure product.
VISCOSITY	30 - 40 cps @ 25 degrees Celsius (Synchro-Lectric Viscometer).

We reserve the right to modify or supplement the specifications to conform to changes in legal requirements.

EXHIBIT "B"**PRICE OF ETHEPHON TECHNICAL**

MICRO FLO'S
NET SELLING PRICE
 (Rounded to the nearest dollar)

PRICE OF
ETHEPHON TECHNICAL

	<i>RP MSP</i>				<i>COGS</i>	<i>COGS</i>	
\$45.00	7.46	4.12	\$4.22	4			
\$44.00	7.30	4.11	\$4.17	5			
\$43.00	7.13	4.09	\$4.13	4			
\$42.00	6.97	4.07	\$4.09	4			
\$41.00	6.80	4.05	\$4.05	4			
\$40.00	6.63		\$4.01	4			
\$39.00	6.47		\$3.97	4	23.94	61.70	39.0
\$38.00	6.30		\$3.92	5			
\$37.00	6.14		\$3.88	4			
\$36.00	5.97		\$3.84	4			
\$35.00	5.80		\$3.80	4	22.91	65.70	35.0
\$34.00	5.64		\$3.76	4			
\$33.00	5.47		\$3.72	4			
\$32.00	5.31		\$3.67	5			
\$31.00	5.14		\$3.63	4			
\$30.00	4.98		\$3.59	4	21.64	72.70	30.0

Above prices subject to increase or decrease based on Cedar's actual increase or decrease in raw material prices, such increase not to exceed 5% of the prior price.

EXHIBIT "C"

LIST OF RAW MATERIALS

Phosphorous Trichloride

Ethylene Oxide

Anhydrous Hydrochloric Acid

CONFIDENTIAL**AMENDMENT AGREEMENT**

THIS AMENDMENT AGREEMENT (the "Amendment") effective this date, February 18, 1997, by and between **MICRO FLO COMPANY**, a Georgia Corporation, with its principal office located at 5925 Imperial Parkway, Suite 130, Mulberry, Florida 33860 (hereinafter "Micro Flo"), and **CEDAR CHEMICAL CORPORATION**, a Delaware corporation, with its principal office located at 5100 Poplar Avenue, Suite 2414, Memphis, Tennessee 38137 (hereinafter "Cedar").

WHEREAS, Micro Flo and Cedar entered into an Agreement (hereinafter "Agreement") dated January 1, 1996, extending through December 31, 2002 with renewable provisions whereby Cedar agreed to sell Micro Flo the Product as defined therein.

WHEREAS, Micro Flo agreed to purchase quantities of Product as provided in the Agreement.

WHEREAS, Micro Flo and Cedar desire to extend the existing Agreement under conditions acceptable to both parties.

NOW THEREFORE, in consideration the premises and mutual covenant contained herein, the parties agree as follows:

1. Section 1 of the Agreement is hereby modified to extend the term of the Agreement through December 31, 2006.
2. Section 2 of the Agreement is hereby modified to include the additional statement:

"Although Micro Flo's obligations shall remain as provided in the original Agreement, Micro Flo desires for Cedar to make available at least 1,750,000 pounds (100% basis) of Product each year. Cedar agrees to make available to Micro Flo up to that full amount, as required by Micro Flo from time to time."

3. Section 6 of the Agreement is modified to the following delivery schedule:
 - (a) 350,000 pounds by May 15
 - (b) 350,000 pounds by June 15
 - (c) 350,000 pounds by July 15
 - (d) 350,000 pounds by August 15
 - (e) 350,000 pounds by September 15

4. Except to the extent expressly modified by the foregoing provisions, the Agreement shall remain in full force and effect in accordance with its terms.

CEDAR CHEMICAL CORPORATION

By: Randal Jomten
President

MICRO-FLO COMPANY

By: [Signature]
V.P. of Finance



5100 Poplar Avenue • Suite 2414 • Memphis, TN 38137 • (901) 685-5348 • Fax (901) 684-5398

Facsimile

File

To: Jeff Sorrell

Company: Sedagri

Fax No.: (919) 549-2200

From: Randal Tomblin

Date: November 13, 2000

cc:

No Pages: 3 (including cover sheet)

Dear Jeff:

I sent the draft agreement to our counsel, and he did not understand that he was simply to review the one sent by you. He thought that I had drawn it up and proceeded to make "lawyerly" changes.

Since he's already done it, I thought I would send it to you for review and comparison. Quite frankly, I'll sign whichever you prefer. Just let me know.

Randal Tomblin

Randal

CONFIDENTIALITY NOTICE

This facsimile transmission is intended for the addressee named above. It may contain information that is privileged, confidential, or otherwise protected from use and disclosure. If you are not the intended recipient, you are hereby notified that any review, disclosure, copying, or dissemination of this transmission or the taking of any action in reliance on its contents, or other use is strictly forbidden. If you have received this transmission in error, please notify us by telephone immediately so we can arrange for its return to us. Thank you for your cooperation.

AGREEMENT

THIS AGREEMENT entered into as of the 15th day of November, 2000, by and between Aventis CropScience USA LP ("Aventis"), successor to Rhone Poulenc Ag Company ("R-P") and Cedar Chemical Corporation ("Cedar").

WHEREAS, R-P and Cedar entered into an Assignment and Assumption Agreement dated as of June 1, 1997, (the "Agreement") pursuant to which Cedar assigned to R-P its rights and obligations under that certain Ethephon Supply Agreement between Cedar and MicroFlo Company dated as of January 1, 1996, as amended by Amendment Agreement dated February 18, 1997, and Aventis assumed Cedar's obligations under the Ethephon Supply Agreement and agreed to pay Cedar certain commissions in connection with its performance thereunder; and

WHEREAS, Aventis desires to purchase from Cedar, and prepay Cedar's rights to receive commissions pursuant to the Agreement, and Cedar is willing to accept such prepayment in accordance with the terms and conditions hereof.

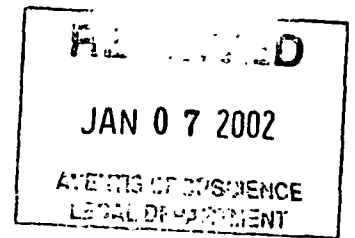
NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, the parties agree as follows:

1. Aventis shall pay to Cedar the sum of Six Million Dollars (\$6,000,000) on or before December 15, 2000, which payment shall be made by check payable to Cedar for delivery to Cedar's office in Memphis, Tennessee to the attention to J. Randal Tomblin, President, via Federal Express, on the first business day following the full execution of this Agreement and delivery of same to Aventis.

2. Cedar agrees to accept the payment referred to in paragraph 1 of this Agreement in full satisfaction of its rights under the Agreement, including its right to receive commissions thereunder and its right to require that the Ethephon Supply Agreement be reassigned to Cedar in accordance with the terms of the Agreement, and will release R-P and Aventis from all remaining obligations to Cedar under the Agreement accruing on or after the date on which Cedar receives such payment.

[Handwritten signature and initials]

January 2, 2002



Subject: Ethephon Supply Agreement to Micro Flo

Len,

As you may recall, we discussed the potential reaction of Micro Flo to our revised ethephon offer, intended to "keep them whole" under the terms of their original contract with Cedar Chemical. I received the attached letter from them today.

I would like for you to review this note, as well as the Cedar supply agreement, so that we may formulate an adequate response.

In a separate phone conversation, I was alerted to the fact that MF still wishes to purchase their ethephon from Aventis, but this is their way of letting us know that they are not happy with the contract they signed. I intend to continue negotiating with my contact there, but feel that it is important that they receive a legal opinion from us as well as to the enforceability of the current contract.

Thanks for you help,

Jeff Sorrell

MICRO ↓ FLO
THE PLANT HEALTH AND PROTECTION COMPANY

December 28, 2001

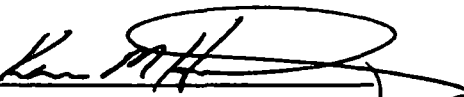
Re: Ethephon Supply Agreement dated January 1, 1996 by and between Micro Flo Company ("Micro Flo") and Cedar Chemical Corporation ("Cedar"), as amended on February 18, 1997 (the "Agreement")

Gentlemen:

Micro Flo has advised Aventis, the assignee of the Agreement, that Micro Flo's NSP for Ethephon 6 (as defined in the Agreement) has dropped below \$32.00 per gallon. The parties have met to negotiate the matter, but have been unable to reach agreement on revised pricing. Therefore, Micro Flo hereby invokes the right granted under Article 5 of the Agreement, and is providing notice that it will terminate the Agreement effective at the end of the current contract year, viz. December 31, 2001. Under the terms of Article 5, Micro Flo will be relieved of any further obligation to purchase Ethephon as of such date.

Micro Flo Company, L.L.C.

By:



Title:

VP. SUPPLY CHAIN

2/28/2001 original to Jeff Sorrell
cc to Len Castillo



RHONE-POULENC AGRO

14-20, RUE PIERRE BAIZET B.P. 9163
69263 LYON CEDEX 09
TÉL. 04 72 85 25 25 - FAX 04 72 85 27 99
TLX 310 098 F RHÔNE

Hold —

CEDAR CHEMICAL CORPORATION
5100 Poplar Avenue, Suite 2414
Memphis, TN 38137 (U.S.A.)
Attn : J. Randal Tomblin

Lyon, le

April, 1st, 1998

Subject Matter : Extension of Term

Dear Mr. Tomblin,

Reference is made to certain Memorandum of Understanding (hereinafter referred to as the "MOU") dated August 13, 1997 between Rhône-Poulenc Agro (hereinafter referred to as "RPA") and Cedar Chemical Corporation which provides the basis for discussions in relation to the supply by Cedar of various intermediates of interest to RPA. The MOU has been amended on December 1st, 1997 to extend its term up to March 31, 1998 inclusive.

The purpose of this letter is for the Parties hereto to extend the term of the above-mentioned MOU up to December 31, 1998 inclusive. The provisions of Article 11 of said Memorandum of understanding are therefore modified accordingly. All other terms and conditions remain unchanged.

If you agree with the terms of the present letter, please return one fully executed original (two are enclosed for such purpose) to RPA's Legal Department , for the attention of Mrs Pyrée.

Yours sincerely,

For and on behalf of
Rhône-Poulenc Agro

A handwritten signature in black ink, appearing to be 'P. Housset', written over the typed name.

P. HOUSSET
Executive Vice-President

Acknowledged and agreed for and on behalf
of Cedar Chemical Corporation

A handwritten signature in black ink, appearing to be 'J. Randal Tomblin', written over the typed name.

J. Randal TOMBLIN
President

FAX

Date 05/15/97

Number of pages including cover sheet

TO: Randal Tomblin
Cedar Chemical Corporation
5100, Poplar Avenue,
Suite 2414
Memphis
TN 38137
Phone 901 685 5348
901 684 5398

FROM: Alan Reade
Rhone-Poulenc
Phone 919 942 3608
Fax Phone 919 933 3611

CC: Jeff Sorrell

REMARKS: ☐ Urgent ☐ For your review ☐ Reply ASAP ☐ Please Comment

Dear Randal,

Thank you for you fax .

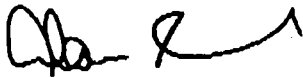
We would be in a position to accept assignment of the Cedar/Microflo supply agreement but only under the following basic terms:

- an assignment period from May 1997 through October 1997
- payment of commission to Cedar of \$1.35 per lb. on the minimum quantity of 1,250,000Lbs (i.e. \$1,687,500 on the fully executed contract)
- a reduction in the 3,4-DCA to 3,4-DCPI of \$200,000 would be subject to as agreement executed between RP Agro and Cedar. We do understand, however, that this would be agreeable to them.
- if RP purchases Cedar's existing inventory of tech it is agreed that the transfer price should be \$3.63 lb (100% ai) subject to it meeting RP's technical specification. The quantity transferred from Cedar would be deducted from RP's obligation to pay commission to Cedar. In other words if the quantity transferred was 300,000 lb. the commission obligation would be reduced to 950,000 lb. x \$1.35.
- all commission payment are to be subject to Microflo executing the supply agreement..

I think it is important that we agree on the above basis before counsel drafts agreements.

I will try and contact you on Friday morning.

Regards



Linda,

Please pass to Jeff Sorrell asap.

Thanks.





5100 Poplar Avenue • Suite 2414 • Memphis, TN 38137 • (901) 685-5348 • Fax (901) 684-5398

J. Randal Tomblin
President
Organic Chemicals

May 15, 1997

CONFIDENTIAL

Mr. Alan Reade
Vice President/General Manager
Rhone-Poulenc Ag Company
P. O. Box 12014, #2 T.W. Alexander Drive
Research Triangle Park, NC 27709

Re: Ethephon

Dear Alan:

(b) (4)

A large, solid black rectangular box covers the majority of the lower half of the page, indicating that the content has been redacted. The text "(b) (4)" is printed in red at the top left corner of this redacted area.

(b) (4)



Regards,

Randal Tomblin

J. Randal Tomblin

Accepted: _____

Alan Reade

JRT:pc
JRT-12-97

cc: Jeffrey Sorrell, Rhone-Poulenc Ag Company

MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING is made and entered as of the date last below written by and between

Rhône-Poulenc Agrochimie, a French société anonyme, with a capital of 1 431.515.000 French Francs, having its registered office at 14/20, rue Pierre Baizet -69009 LYON- France, registered in Lyon under number B 969 503 309, hereinafter referred to as "RPA",

and

Cedar Chemical Corporation, a corporation duly incorporated under the laws of the State of Delaware and having its principal offices at 5100 Poplar Avenue, suite 2414, Memphis, TN 38137, United States, hereinafter referred to as "CEDAR",

Witnesseth:

- ◆ WHEREAS, RPA has a need for a supply source for various intermediates to be used in the manufacture of RPA strategic active ingredients;
- ◆ WHEREAS, CEDAR has a facility capable of manufacturing intermediates and is willing to enter into a supply arrangement with RPA;
- ◆ WHEREAS, it is understood and agreed that, subject to paragraph 10 below, RPA and CEDAR will commence negotiations with each other in good faith forthwith with an intent to reach an agreement or agreements in writing, satisfactory in form and substance to their respective managements reflecting the principles set forth herein.

NOW, THEREFORE, in consideration of the premises and the terms and conditions herein contained the Parties have agreed as follows:

to MICRO FLO in 1997 according to the aforesaid Agreement and Assumption Agreement. For the 1997 calendar year, CEDAR's commissions shall be payable only with respect to 1,250,000 pounds, less the number of pounds in CEDAR's inventory as of July, 1 1997 purchased by RPAC in accordance with the Assignment and Assumption Agreement.

RPA shall report to CEDAR on the 10th day of each calendar month during 1997 all sales of Product by RPAC to MICRO FLO during the immediately preceding month. Commissions hereunder shall be payable to CEDAR sixty (60) days from the date of shipment to MICRO FLO. CEDAR's said commission on sales of Product by RPAC to MICRO FLO during 1997 shall be increased by the amount by which the price of Product sold by RPAC to MICRO FLO shall exceed \$3.63 per pound (100% basis) as determined under Paragraph four (4) of the Ethephon Supply Agreement, such additional commission to be due and payable by RPA to CEDAR within fifteen (15) days following the determination of MICRO FLO's Net Selling Price under the Supply Agreement.

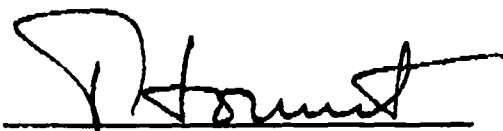
5. The Parties also agree that, should any trial production of the Intermediates prove unsatisfactory, they may analyse the feasibility of toll manufacturing cyclanilid at CEDAR's facility in West Helena, Arkansas. Such study should be completed during the 1997 calendar year.
6. As soon as practicable after the signature of this Agreement, RPA shall submit to CEDAR the terms and conditions under which it proposes for CEDAR to supply it with intermediates. If no formal agreement of the type contemplated herein is put in place by the end of October 1997 or such other date as the parties may agree, either Party shall have the right to terminate this Memorandum of Understanding. RPA and CEDAR must, in that case, mutually determine whether the Ethephon Supply Agreement be reassigned to CEDAR, or whether RPA will continue to supply Product to MICRO FLO with a continuing obligation to pay commissions earned through the term of the aforesaid Assignment and Assumption Agreement, in accordance with Paragraph 4 of this Memorandum of Understanding.
7. Unless otherwise agreed, the Parties agree that neither Party shall make any public announcement of the existence of, or the matters referred to in, this Memorandum of Understanding.



8. This Memorandum of Understanding is subject to the conclusion of definitive agreement(s) mutually acceptable and binding upon the Parties. Except for paragraph 7 above, it shall not commit either of the Parties to the other nor have any binding legal effect on the Parties hereto until such time as they are signed. Accordingly, neither Party shall incur any liability, financial or otherwise, to the other hereunder should they fail to achieve the purpose contemplated herein.
9. This Memorandum of Understanding shall be governed by, and construed and interpreted in accordance with the law of the State of Arkansas. Any dispute or proceeding arising out of or relating to this Memorandum of Understanding shall be referred to arbitration by a single arbitrator appointed in accordance with, and applying, the Rules of Conciliation and Arbitration of the International Chamber of Commerce.
10. This Memorandum of Understanding may only be amended, modified or waived by a separate written document signed by the Parties.
11. This Memorandum of Understanding shall become effective on the date last below written and shall remain valid until the signature of the contemplated agreement or agreements which shall occur not later than the end of October 1997. At such date this Memorandum shall automatically expire.

NOW THEREFORE, the Parties have caused this document to be executed in duplicate by their duly authorised representatives as of the dates indicated below.

Rhône-Poulenc Agrochimie

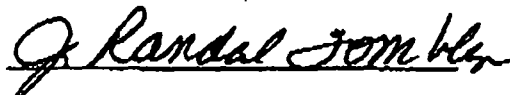


Name : P. Housset

Titre : Executive Vice President

Date :

Cedar Chemical Corporation

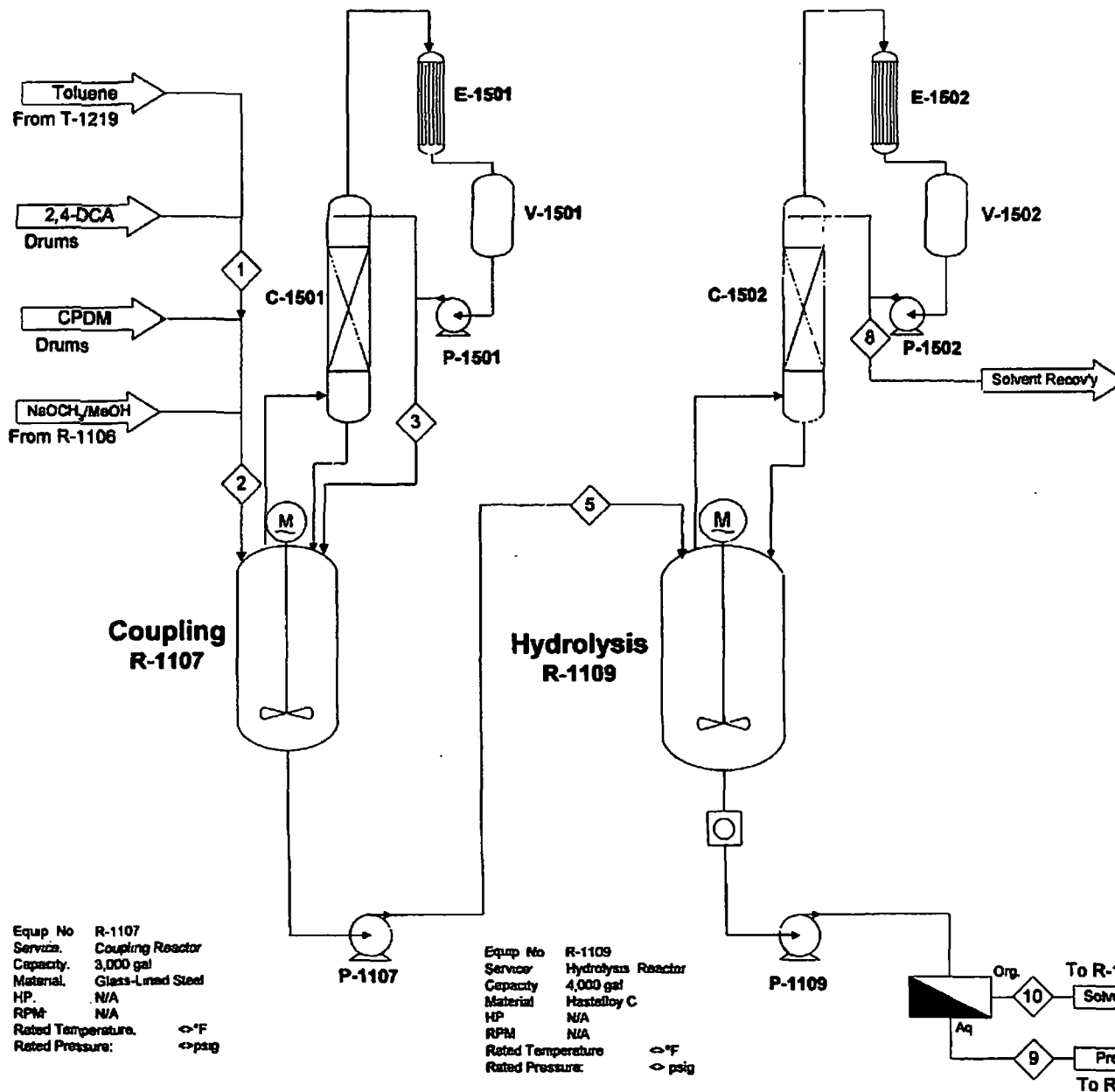


Name : J. Randal Tomblin

Title : President

Date : Aug 13, 1997

Please:
one day send
back original
to Jeff Smith



Equip. No. C-1501 (NEW)
Service: Coupling Column
Capacity: 24" dia x 10' T/T
Material: 316L SS
HP: N/A
RPM: N/A
Rated Temperature: 400°F
Rated Pressure: 30 psig & FV

Equip. No. C-1502 (NEW)
Service: Coupling Column
Capacity: 24" dia x 10' T/T
Material: 316L SS
HP: N/A
RPM: N/A
Rated Temperature: 400°F
Rated Pressure: 30 psig & FV

Equip. No. E-1501 (NEW)
Service: Coupling Condenser
Capacity: 300 sq. ft.
Material: 316LSS tube/CS shell
HP: N/A
RPM: N/A
Rated Temperature: 400°F
Rated Pressure: 30 psig & FV

Equip. No. E-1502 (NEW)
Service: Coupling Condenser
Capacity: 300 sq. ft.
Material: 316LSS tube/CS shell
HP: N/A
RPM: N/A
Rated Temperature: 400°F
Rated Pressure: 30 psig & FV

Equip. No. V-1501 (NEW)
Service: Coupling Receiver
Capacity: 350 gal.
Material: 316L SS
HP: N/A
RPM: N/A
Rated Temperature: 400°F
Rated Pressure: 30 psig & FV

Equip. No. V-1502 (NEW)
Service: Coupling Receiver
Capacity: 350 gal.
Material: 316L SS
HP: N/A
RPM: N/A
Rated Temperature: 400°F
Rated Pressure: 30 psig & FV

Equip. No. P-1501 (NEW)
Service: Coupling Recv Pump
Capacity: 30 gpm @ 40' TDH
Material: 316 SS
HP: TBD
RPM: TBD
Rated Temperature: <>°F
Rated Pressure: <>psig

Equip. No. P-1502 (NEW)
Service: Coupling Recv Pump
Capacity: 30 gpm @ 40' TDH
Material: 316 SS
HP: TBD
RPM: TBD
Rated Temperature: <>°F
Rated Pressure: <>psig

Equip. No. R-1107
Service: Coupling Reactor
Capacity: 3,000 gal.
Material: Glass-Lined Steel
HP: N/A
RPM: N/A
Rated Temperature: <>°F
Rated Pressure: <>psig

Equip. No. R-1109
Service: Hydrolysis Reactor
Capacity: 4,000 gal.
Material: Hastelloy C
HP: N/A
RPM: N/A
Rated Temperature: <>°F
Rated Pressure: <>psig

Equip. No. P-1107 (NEW)
Service: Coupling Transfer
Capacity: 150 gpm @ 70' TDH
Material: 316 SS
HP: TBD
RPM: TBD
Rated Temperature: 400°F
Rated Pressure: TBD

Equip. No. P-1109
Service: Hydrolysis Transfer
Capacity: 300 gpm @ 94' TDH
Material: Hastelloy C
HP: <>
RPM: <>
Rated Temperature: <>°F
Rated Pressure: <>psig



Title: Cyclanilide 90946 Process Flow Diagram
Page 1 of 4 Pages

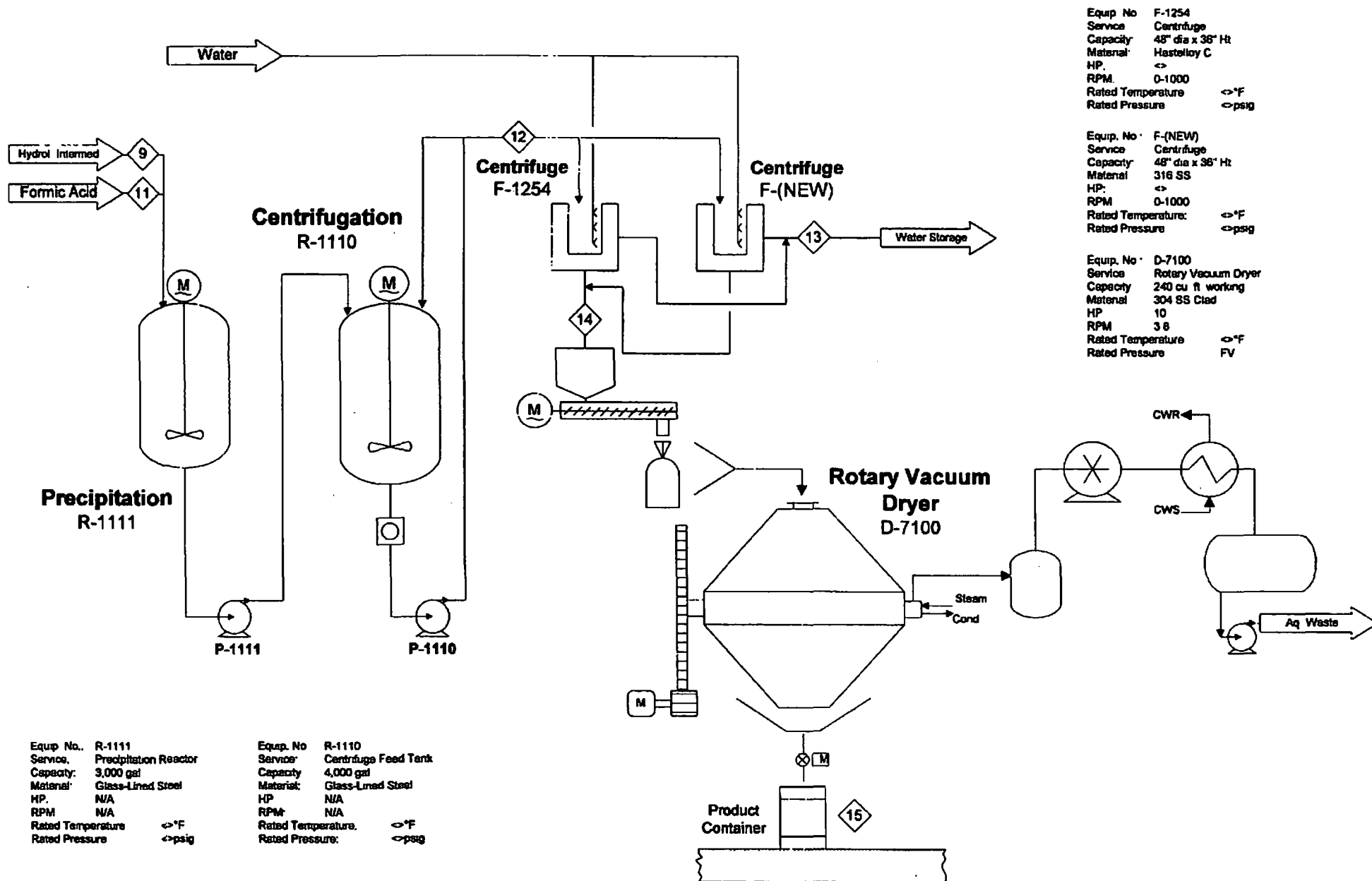
Drawn:
DCG

Scale:
None

Date:
03/15/00

Rev:
B

AB0000088000



Equip. No F-1254
 Service Centrifuge
 Capacity 48" dia x 36" Ht
 Material Hastelloy C
 HP. <>
 RPM 0-1000
 Rated Temperature <>*F
 Rated Pressure <>psig

Equip. No F-(NEW)
 Service Centrifuge
 Capacity 48" dia x 36" Ht
 Material 316 SS
 HP. <>
 RPM 0-1000
 Rated Temperature <>*F
 Rated Pressure <>psig

Equip. No D-7100
 Service Rotary Vacuum Dryer
 Capacity 240 cu ft working
 Material 304 SS Clad
 HP 10
 RPM 3.6
 Rated Temperature <>*F
 Rated Pressure FV

Equip. No. R-1111
 Service Precipitation Reactor
 Capacity 3,000 gal
 Material Glass-Lined Steel
 HP. N/A
 RPM N/A
 Rated Temperature <>*F
 Rated Pressure <>psig

Equip. No R-1110
 Service Centrifuge Feed Tank
 Capacity 4,000 gal
 Material Glass-Lined Steel
 HP. N/A
 RPM N/A
 Rated Temperature <>*F
 Rated Pressure <>psig

Equip. No P-1111 (NEW)
 Service Precipitation Transfer
 Capacity 150 gpm @ 70' TDH
 Material 316 SS
 HP. TBD
 RPM TBD
 Rated Temperature 400°F
 Rated Pressure TBD

Equip. No. P-1110
 Service Centrifuge Feed Pump
 Capacity 150 gpm @ 73' TDH
 Material 316 SS
 HP. TBD
 RPM TBD
 Rated Temperature 400°F
 Rated Pressure TBD



Title: Cyclanilide 90946 Process Flow Diagram
 Page 2 of 4 Pages

Drawn:
 DCG

Scale:
 None

Date:
 03/15/00

Rev:
 B

AB0000088000

Aventis: Cyclanilide-Huls Technology Basis—Two (2) Centrifuge Option
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./plow
5. Dryer discharge at 0.5% LOD
6. All Yield calculations based on DCA
7. ---
8. ---
9. ---
10. ---

Summary of Results

Final Product lb/bx: 2,936 lb
 Limiting Cycle Time: 27.7 hours
 Final Product lb/day: 2,543 lb/day
 Final Product MT/day: 1.2 MT/day

Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Premix Initial Charge	R-7 Charge + Premix	MeOH Strip	O/H Charged Back	Intermed Xferred to R-9	R-9 Water Charge	R-9 Hydr. Intermediate	MeOH Distillat'n	Intermed. Xferred to R-11	Hydrol. Org. Phase to Rec'y	R-11 Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		2,292.8									
2,4 DCA	162.00	2,292.8	2,292.8									
NaOCH3	54.00		866.7									
MeOH	32.00		2,022.3									
H2O	18.00						11,464.0	11,464.0		11,464.0		
NaOH	40.00							232.3				
Formic Acid	46.03											1,146.4
Xylene	106.17	3,439.2	11,750.6	160.5	160.5	11,750.6		11,750.6			11,750.6	
(By) Products												
Na-CPMPA	310.10					4,339.8						
MeOH	32.00			3,049.4	3,049.4	3,049.4		447.8	447.8			
Na-RPA 90946	296.10							4,040.2		4,040.2		
RPA 90946	274.10											
NaCHO2	68.01											
Others	---											
Stream Weight, lb/batch		5,732.0	19,225.2	3,209.9	3,209.9	19,139.8	11,464.0	27,935.1	447.8	15,504.3	11,750.6	1,146.4
Stream Volume, gal (ft3)		703.8	2,442.3	484.6	385.3	2,703.2	1,376.2	3,457.3	67.9	1,918.8	1,623.3	116.6
Temperature, °F		100.0	136.0	148.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia (torr)		14.7	14.7	(270)	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.87	0.95	0.80	1.00	0.85	1.00	0.97	0.79	0.97	0.87	1.18
Viscosity, cP (cSt)												
Molar Yield (Overall)						96.5%		97.5%				

Reactor Nom. Volume (gal): 3,000.0 3,000.0 4,000.0 3,000.0
 Reactor Filled Percentage: 81% 90% 86% 64%

Aventis: Cyclanilide-Huls Techn
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./pl
5. Dryer discharge at 0.5% LOD

Stream No.		R-1110	CF:F1254	D-7100	Packout	Solvent Recovery		Water Recovery		Waste Streams	
		12	13	14	15	16	17	18	19	20	21
Description		Precipit'd Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Xylene to Recycle	Recycled Toluene	Water to Recycle	Recycled Water	Organic Waste	Aqueous Waste
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH3	54.00										
MeOH	32.00										
H2O	18.00	11,464.0	11,935.3	1,099.6	18.2	1.8		13,034.9	12,736.0	1.8	298.9
NaOH	40.00										
Formic Acid	46.03										
Xylene	106.17					11,750.6	8,345.7			3,405.0	
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00									6,546.7	
Na-RPA 90946	296.10										
RPA 90946	274.10	3,665.2		3,646.9	2,917.5						
NaCHO2	68.01	1,693.8	1,693.8					1,693.8			1,693.8
Others	—					364.7				364.7	
Stream Weight, lb/batch		16,823.0	13,629.1	4,746.5	2,935.8	12,117.1	8,345.7	14,728.6	12,736.0	10,318.1	1,992.7
Stream Volume, gal (ft3)		2,082.0	1,558.2			1,678.4	1,156.0	1,637.2	1,528.9	1,515.6	208.0
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0	68.0	68.0
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.97	1.05			0.87	0.87	1.08	1.00	0.82	1.15
Viscosity, cP (cSt)											
Molar Yield (Overall)		98.0%			{92.2%}						

Reactor Nom. Volume (gal): 4,000.0
Reactor Filled Percentage: 52%

Aventis: Cyclanilide—Huls Technology Basis—Two (2) Centrifuge Option
Cycle Time Analysis

Cycle Time Analysis		Step Cycle Time	Vessel Cycle Time	Rate Limiting Time 27.7 hours	
Premix Prep (R-1107)	Charge Toluene	0.5	Σ = 2.8	Total Batch Time Req'd	64.1 hours
	Charge 2,4 DCA	1.3 [Drum]			
	Mix/Hold	1.0			
Coupling Reaction (R-1107)	Charge Premix	0.4	Σ = 9.0	Notes: nn.n indicates calculated value, otherwise value is estimated	
	Draw Vacuum	0.3			
	Heat to 56-59°C	0.8			
	Charge Na Methoxide	3.0			
	Distill MeOH/Toluene Azeotrope	2.0			
	Cool to 60-65°C	1.0			
	Charge Water	0.0			
	Transfer to Hydrolysis Rxtr	1.5			
Hydrolysis Reaction (R-1109)	Charge Water	1.5	Σ = 10.0		
	Heat/Reflux	3.0			
	Distill MeOH	2.5			
	Cool Rxtr <50°C	1.0			
	Sample/NaOH Adjust	0.0			
	Phase Separate / Transfer	2.0			
Precipitation (R-1111)	Cool <25°C	1.0	Σ = 6.0		
	Charge Formic Acid	3.0			
	Mix	0.5			
	Sample/Results	0.5			
	Transfer	0.5			
Centrifugation (R-1110, F-1254)	Centrifuge Batch	27.7	Σ = 27.7 (100 kg plow per 8 hrs)		
Drying	Charge 1.5 batches	1.0	Σ = 8.5		
	Dry Batch	6.0			
	Packout	1.5			

OOST ESTIMATE SUMMARY		PAGE	2 of 3
PROJECT:	CYCLANILIDE V3 (CENTRIFUGE)	DATE:	16-Mar-00
PROJECT ENGINEER:	M. REINSAGER	REV.	
LABOR RATE:	\$35.00		

DATE: 16-Mar-00

DATE: 16-Mar-00

REV.

REV.

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PAGE 2 of 3

DATE: 18-Mar-00

REV.

REV.

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COST ESTIMATE SUMMARY

PAGE 3 of 3

PROJECT: CYCLANILIDE V3 (CENTRIFUGE)

DATE 16-Mar-00

PROJECT ENGINEER

M REINSAGER

REV

LABOR RATE

\$35 00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
VALVES - SS (1-2 IN)	35	EA		0	\$0 00	\$8,750 00	\$8,750 00
VALVES - SS (4-6 IN)		EA		0	\$0 00	\$0 00	\$0 00
FITTINGS, TFE (1-2 IN)		EA		0	\$0 00	\$0 00	\$0 00
FITTINGS, TFE (3-6 IN)		EA		0	\$0 00	\$0 00	\$0 00
INSULATION (2-4 IN)	100	LF	0 40	40	\$1,400 00	\$1,000 00	\$2,400 00
PAINTING		LF	0 20	0	\$0 00	\$0 00	\$0 00
PSV		EA	5 00	0	\$0 00	\$0 00	\$0 00
RUPTURE DISC		EA	5 00	0	\$0 00	\$0 00	\$0 00
STEAM TRACING/INS	150	LF	0 50	75	\$2,625 00	\$1,200 00	\$3,825 00
PIPING MISC (HANGERS, ETC.)	8	LOT	40 00	320	\$11,200 00	\$6,400 00	\$17,600 00
HOT WATER MIXER		LOT	20 00	0	\$0 00	\$0 00	\$0 00
SUBTOTAL				3020	\$105,700 00	\$48,950 00	\$154,650 00
9.0 ELECTRIC/INSTRUMENTATION							
SCALE	1	EA	20 00	20	\$700 00	\$2,500 00	\$3,200 00
MOTOR (20-40 HP)	4	EA	24 00	96	\$3,360 00	\$6,000 00	\$9,360 00
WIRING/CONDUIT/TRAY	800	LF	0 70	560	\$19,600 00	\$9,600 00	\$29,200 00
FLOW INST (MICRO-MOTION)	4	EA	48 00	192	\$6,720 00	\$20,000 00	\$26,720 00
FLOW INSTRUMENTS		EA	10 00	0	\$0 00	\$0 00	\$0 00
PRESSURE INSTRUMENTS/CTRL		EA	50 00	0	\$0 00	\$0 00	\$0 00
LEVEL INSTRUMENTS	4	EA	42 00	168	\$5,880 00	\$6,000 00	\$11,880 00
GUAAGES	16	EA	0 80	13	\$448 00	\$1,200 00	\$1,648 00
TEMP INDICATOR	5	EA	2 00	10	\$350 00	\$1,000 00	\$1,350 00
CONTROL VALVES	8	EA	24 00	192	\$6,720 00	\$16,000 00	\$22,720 00
PRESSURE REGULATORS	2	EA	8 00	16	\$560 00	\$1,000 00	\$1,560 00
CONTROL FRS	4	EA	12 00	48	\$1,680 00	\$3,200 00	\$4,880 00
INTERLOCKS (MINIMAL)	8	EA	10 00	80	\$2,800 00	\$2,400 00	\$5,200 00
CENTRIFUGE CONTROL	1	EA	250 00	250	\$8,750 00	\$15,000 00	\$23,750 00
CONTROL ROOM/MCC		EA	650 00	0	\$0 00	\$0 00	\$0 00
ELECTRICAL MISC	4	LOT	160 00	640	\$22,400 00	\$12,000 00	\$34,400 00
SWITCHES	8	EA	10 00	80	\$2,800 00	\$1,600 00	\$4,400 00
SUBTOTAL				2365	\$82,768 00	\$97,500 00	\$180,268 00
10.0 INSPECTION/ENGINEERING							
VESSEL INSPECTIONS		EA			\$0 00		\$0 00
ENGINEERING/OCS CONFIG	20	LOT	40 00	800	\$28,000 00		\$28,000 00
DRAFTING/DESIGN	20	LOT	40 00	800	\$28,000 00		\$28,000 00
SUBTOTAL				1600	\$56,000 00	\$0 00	\$56,000 00
11.0 RENTALS							
CRANE	3	LOT				\$4,500 00	\$4,500 00
EQUIPMENT		LOT				\$0 00	\$0 00
FREIGHT (ALL ABOVE)	6	LOT				\$9,000 00	\$9,000 00
12.0 MISCELLANEOUS							
LAB EQUIPMENT		LOT				\$0 00	\$0 00
SUBTOTAL						\$9,000 00	\$9,000 00
SUBTOTAL				11782.3	\$412,380.50	\$423,985.00	\$836,365.50
OVERTIME (50%)							
CONTINGENCY (40%)					\$164,952.20	\$169,594.00	\$334,546.20
TOTAL					\$577,332.70	\$593,579.00	\$1,170,911.70

Aventis: Cyclanilide--Huls Technology Basis--One (1) Centrifuge Option

Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./plow
5. Dryer discharge at 0.5% LOD
6. All Yield calculations based on DCA
7. ---
8. ---
9. ---
10. ---

Summary of Results

Final Product lb/bx: 2,936 lb
 Limiting Cycle Time: 55.4 hours
 Final Product lb/day: 1,271 lb/day
 Final Product MT/day: 0.6 MT/day

Stream No.		R-1107					R-1109			R-1111		
Description		Premix Initial Charge	R-7 Charge + Premix	MeOH Strip	O/H Charged Back	Intermed Xferred to R-9	R-9 Water Charge	R-9 Hydr. Intermediate	MeOH Distillat'n	Intermed. Xferred to R-11	Hydrol. Org. Phase to Rec'y	R-11 Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		2,292.8									
2,4 DCA	162.00	2,292.8	2,292.8									
NaOCH3	54.00		866.7									
MeOH	32.00	-	2,022.3									
H2O	18.00	-					11,464.0	11,464.0		11,464.0		
NaOH	40.00							232.3				
Formic Acid	46.03	-										1,146.4
Xylene	106.17	3,439.2	11,750.6	160.5	160.5	11,750.6		11,750.6			11,750.6	
(By) Products												
Na-CPMPA	310.10					4,339.8						
MeOH	32.00	-		3,049.4	3,049.4	3,049.4		447.8	447.8			
Na-RPA 90946	296.10	-						4,040.2		4,040.2		
RPA 90946	274.10											
NaCHO2	68.01	-										
Others	---											
Stream Weight, lb/batch		5,732.0	19,225.2	3,209.9	3,209.9	19,139.8	11,464.0	27,935.1	447.8	15,504.3	11,750.6	1,146.4
Stream Volume, gal (ft3)		793.8	2,442.3	484.6	385.3	2,703.2	1,376.2	3,457.3	67.9	1,918.8	1,623.3	116.6
Temperature, °F		100.0	136.0	146.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia (torr)		- 14.7	14.7	(270)	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		- 0.87	0.95	0.80	1.00	0.85	1.00	0.97	0.79	0.97	0.87	1.18
Viscosity, cP (cSt)		-										
Molar Yield (Overall)		-				96.5%		97.5%				
Reactor Nom. Volume (gal):		3,000.0					3,000.0			4,000.0		
Reactor Filled Percentage:		81%					90%			86%		

Aventis: Cyclanilide-Huls Techn
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./pl
5. Dryer discharge at 0.5% LOD

		R-1110	CF-F1254	D-7100	Packout	Solvent Recovery		Water Recovery		Waste Streams	
Stream No.		12	13	14	15	16	17	18	19	20	21
Description		Precipit'd Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Xylene to Recycle	Recycled Toluene	Water to Recycle	Recycled Water	Organic Waste	Aqueous Waste
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH3	54.00										
MeOH	32.00										
H2O	18.00	11,464.0	11,935.3	1,099.6	18.2	1.8		13,034.9	12,736.0	1.8	298.9
NaOH	40.00										
Formic Acid	46.03										
Xylene	106.17					11,750.6	8,345.7			3,405.0	
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00									6,546.7	
Na-RPA 90946	296.10										
RPA 90946	274.10	3,665.2		3,646.9	2,917.5						
NaCHO2	68.01	1,693.8	1,693.8					1,693.8			1,693.8
Others	--					364.7				364.7	
Stream Weight, lb/batch		16,823.0	13,629.1	4,746.5	2,935.8	12,117.1	8,345.7	14,728.6	12,736.0	10,318.1	1,992.7
Stream Volume, gal (ft3)		2,082.0	1,558.2			1,678.4	1,156.0	1,637.2	1,528.9	1,515.6	208.0
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0	68.0	68.0
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.97	1.05			0.87	0.87	1.08	1.00	0.82	1.15
Viscosity, cP (cSt)											
Molar Yield (Overall)		98.0%			{92.2%}						

Reactor Nom. Volume (gal): 4,000.0
 Reactor Filled Percentage: 52%

Aventis: Cyclanilide-Huls Technology Basis—One (1) Centrifuge Option
Cycle Time Analysis

		Step Cycle Time	Vessel Cycle Time	Rate Limiting Time 55.4 hours
Premix Prep (R-1107)	Charge Toluene	0.5		
	Charge 2,4 DCA	1.3 [Drum]		
	Mix/Hold	1.0	Σ = 2.8	Total Batch 91.8 hours Time Req'd
Coupling Reaction (R-1107)	Charge Premix	0.4		
	Draw Vacuum	0.3		
	Heat to 56-59°C	0.8		
	Charge Na Methoxide	3.0		
	Distill MeOH/Toluene Azeotrope	2.0		
	Cool to 60-65°C	1.0		
	Charge Water	0.0		
	Transfer to Hydrolysis Rxtr	1.5	Σ = 9.0	Notes: nn.n indicates calculated value, otherwise value is estimated
Hydrolysis Reaction (R-1109)	Charge Water	1.5		
	Heat/Reflux	3.0		
	Distill MeOH	2.5		
	Cool Rxtr <50°C	1.0		
	Sample/NaOH Adjust	0.0		
	Phase Separate / Transfer	2.0	Σ = 10.0	
Precipitation (R-1111)	Cool <25°C	1.0		
	Charge Formic Acid	3.0		
	Mix	0.5		
	Sample/Results	0.5		
	Transfer	0.5	Σ = 6.0	
Centrifugation (R-1110, F-1254)	Centrifuge Batch	55.4	Σ = 55.4 (100 kg plow per 8 hrs)	
Drying	Charge 1.5 batches	1.0		
	Dry Batch	6.0		
	Packout	1.5	Σ = 8.5	

Aventis: Cyclanilide—Huls Technolo
Cycle Time Analysis

Premix Prep (R-1107) **Charge Tol**
 Charge 2,4
 Mix/Hold

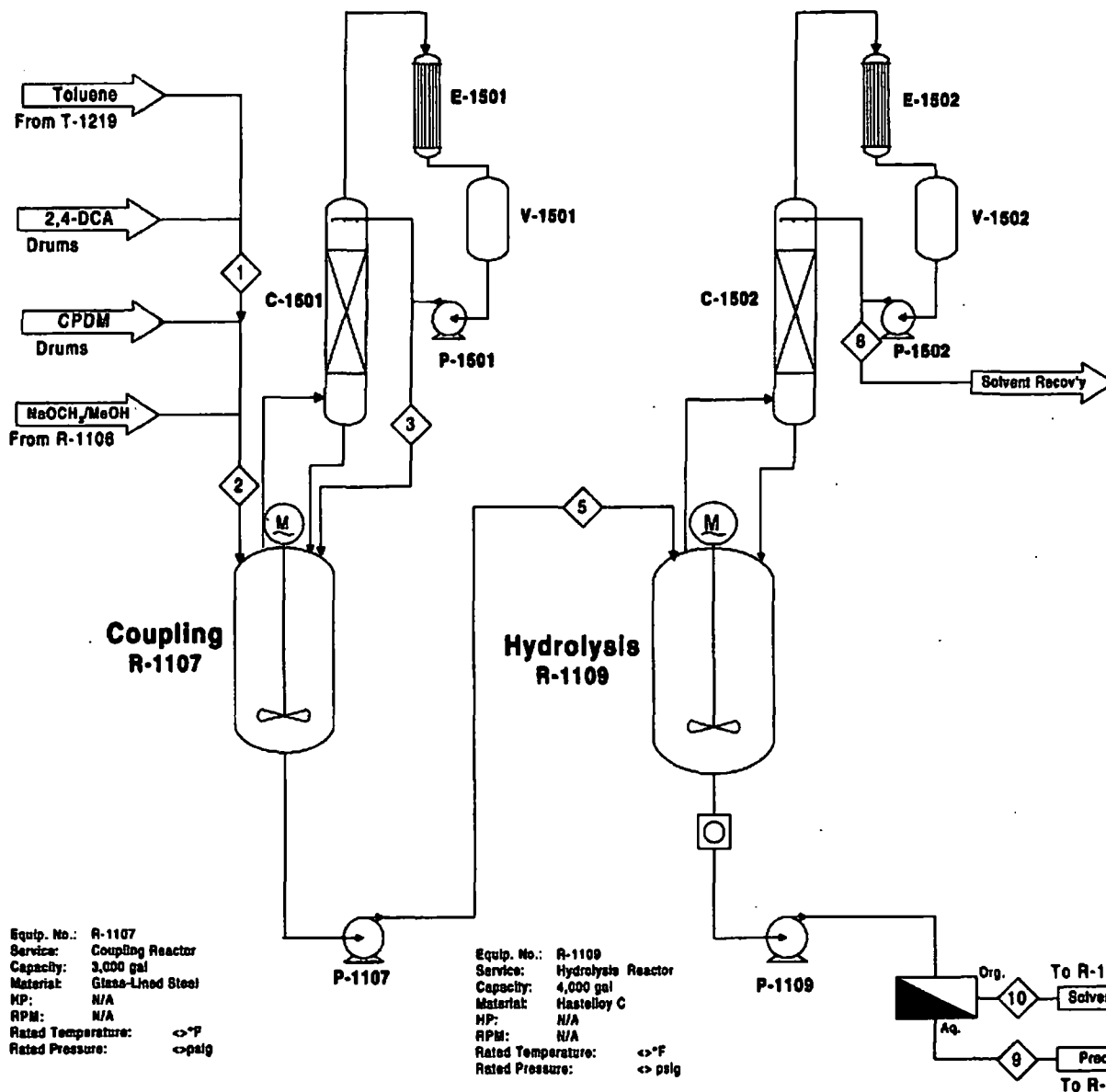
Coupling Reaction **Charge Pre**
(R-1107) **Draw Vacu**
 Heat to 58-!
 Charge Na
 Distill MeOt
 Cool to 60-!
 Charge Wa
 Transfer to

Hydrolysis Reaction **Charge Wa**
(R-1109) **Heat/Reflux**
 Distill MeOt
 Cool Rxtr <
 Sample/Na
 Phase Sep:

Precipitation (R-1111) **Cool <25°C**
 Charge For
 Mix
 Sample/Re:
 Transfer

Centrifugation (R-1110, **Centrifuge I**
F-1254)

Drying **Charge 1.5**
 Dry Batch
 Packout



Equip. No.: R-1107
 Service: Coupling Reactor
 Capacity: 3,000 gal
 Material: Glass-Lined Steel
 HP: N/A
 RPM: N/A
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: P-1107 (NEW)
 Service: Coupling Transfer
 Capacity: 150 gpm @ 70' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: 400°F
 Rated Pressure: TBD

Equip. No.: R-1109
 Service: Hydrolysis Reactor
 Capacity: 4,000 gal
 Material: Hastelloy C
 HP: N/A
 RPM: N/A
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: P-1109
 Service: Hydrolysis Transfer
 Capacity: 300 gpm @ 94' TDH
 Material: Hastelloy C
 HP: <>
 RPM: <>
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: C-1501 (NEW)
 Service: Coupling Column
 Capacity: 24" dia x 10' T/T
 Material: 316L SS
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No.: E-1501 (NEW)
 Service: Coupling Condenser
 Capacity: 300 sq. ft.
 Material: 316LSS tube/CS shell
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No.: V-1501 (NEW)
 Service: Coupling Receiver
 Capacity: 350 gal
 Material: 316L SS
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No.: P-1501 (NEW)
 Service: Coupling Recv Pump
 Capacity: 30 gpm @ 40' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: C-1502 (NEW)
 Service: Coupling Column
 Capacity: 24" dia x 10' T/T
 Material: 316L SS
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No.: E-1502 (NEW)
 Service: Coupling Condenser
 Capacity: 300 sq. ft.
 Material: 316LSS tube/CS shell
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No.: V-1502 (NEW)
 Service: Coupling Receiver
 Capacity: 350 gal
 Material: 316L SS
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No.: P-1502 (NEW)
 Service: Coupling Recv Pump
 Capacity: 30 gpm @ 40' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: <>°F
 Rated Pressure: <>psig



Title: Cycanilide 90946 Process Flow Diagram
 Page 1 of 4 Pages

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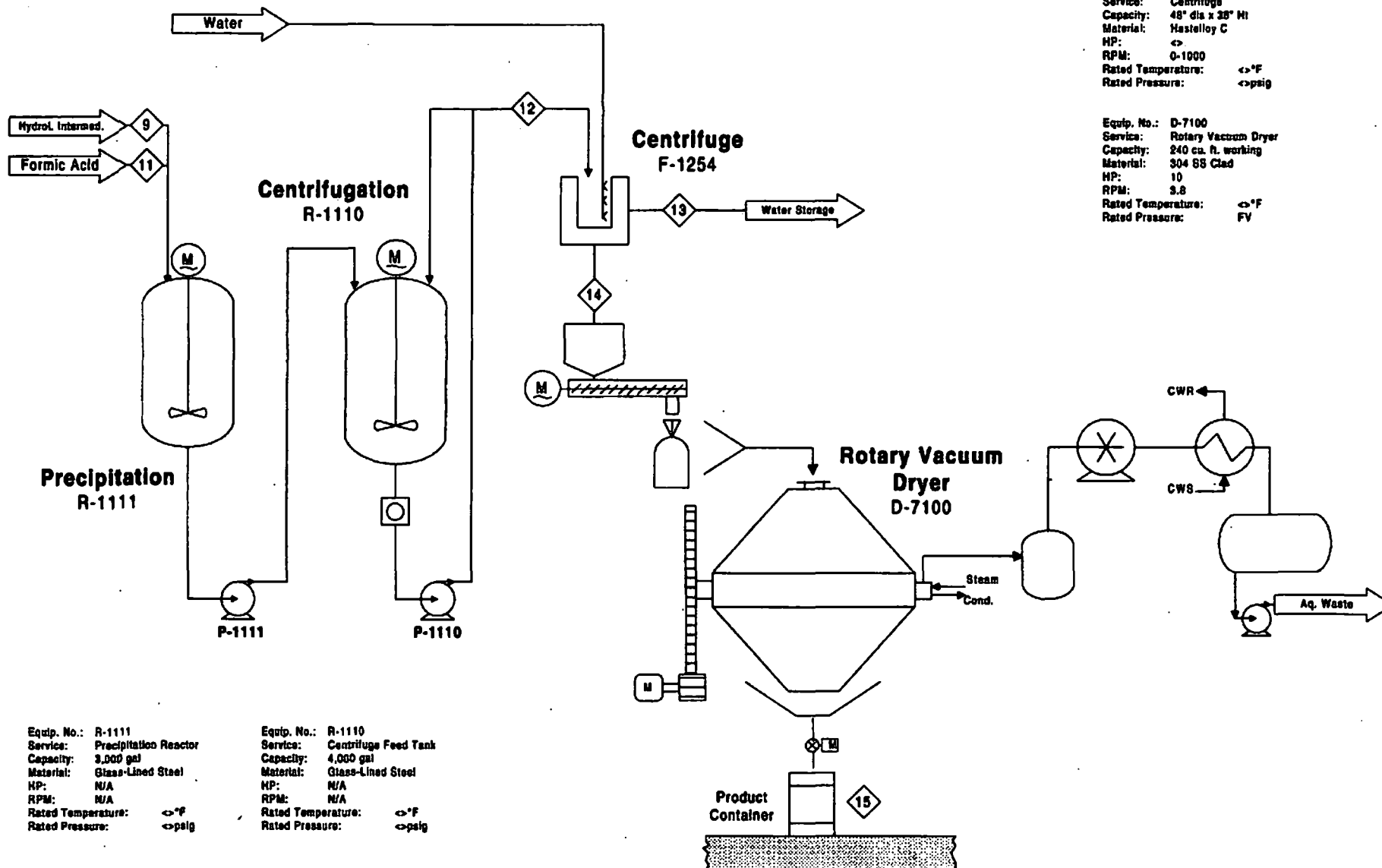
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Rev:
B

Equip. No.: F-1254
 Service: Centrifuge
 Capacity: 48" dia x 38" Ht
 Material: Hastelloy C
 HP: <>
 RPM: 0-1000
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: D-7100
 Service: Rotary Vacuum Dryer
 Capacity: 240 cu. ft. working
 Material: 304 SS Clad
 HP: 10
 RPM: 3.8
 Rated Temperature: <>°F
 Rated Pressure: FV



Equip. No.: R-1111
 Service: Precipitation Reactor
 Capacity: 3,000 gal
 Material: Glass-Lined Steel
 HP: N/A
 RPM: N/A
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: R-1110
 Service: Centrifuge Feed Tank
 Capacity: 4,000 gal
 Material: Glass-Lined Steel
 HP: N/A
 RPM: N/A
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: P-1111 (NEW)
 Service: Precipitation Transfer
 Capacity: 150 gpm @ 70' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: 400°F
 Rated Pressure: TBD

Equip. No.: P-1110
 Service: Centrif. Feed Pump
 Capacity: 150 gpm @ 73' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: 400°F
 Rated Pressure: TBD



Title: Cyclanilide 90946 Process Flow Diagram
 Page 2 of 4 Pages

Drawn: DCG	Scale: None	Date: 03/15/00	Rev: B
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To: Joe Mancini Date: 3/17/00
Location: Memphis Office Copy to: Chris McGee
From: D.C. Guffey Kevin Payne
Location: Helena Plant Geoff Pratt
Extension: 283 Jim Rone
Subject: Cyclanilide Process
Reference:

Attached are the flowsheets (w/o recovery and emissions control drawings), material balance, and cost estimate for two Cyclanilide cases: 1) minimum capital and 2) maximum productivity. Please note the productivity numbers are greatly impacted by centrifuge cycle-time data obtained on the Degussa Hüls plant visit.

As you may recall, the Degussa centrifuge cycle is approximately eight (8) hours for a 300 kg batch with each centrifuge payload resulting in approximately 100 kg of wet (~17%) material. Further, the Degussa centrifuge is the same size as the Unit 1 centrifuge (and Unit 5) and operates at speeds typical to the Cedar centrifuge. This means the maximum productivity of the plant is 82.7 lb/hr or 1,984 lb/day (0.9 MT/d) at 100% OST. Taking into account yield and OST, the maximum productivity of the plant is then 1,272 lb/day (0.6 MT/d) regardless of how much crude material is produced in the reactors.

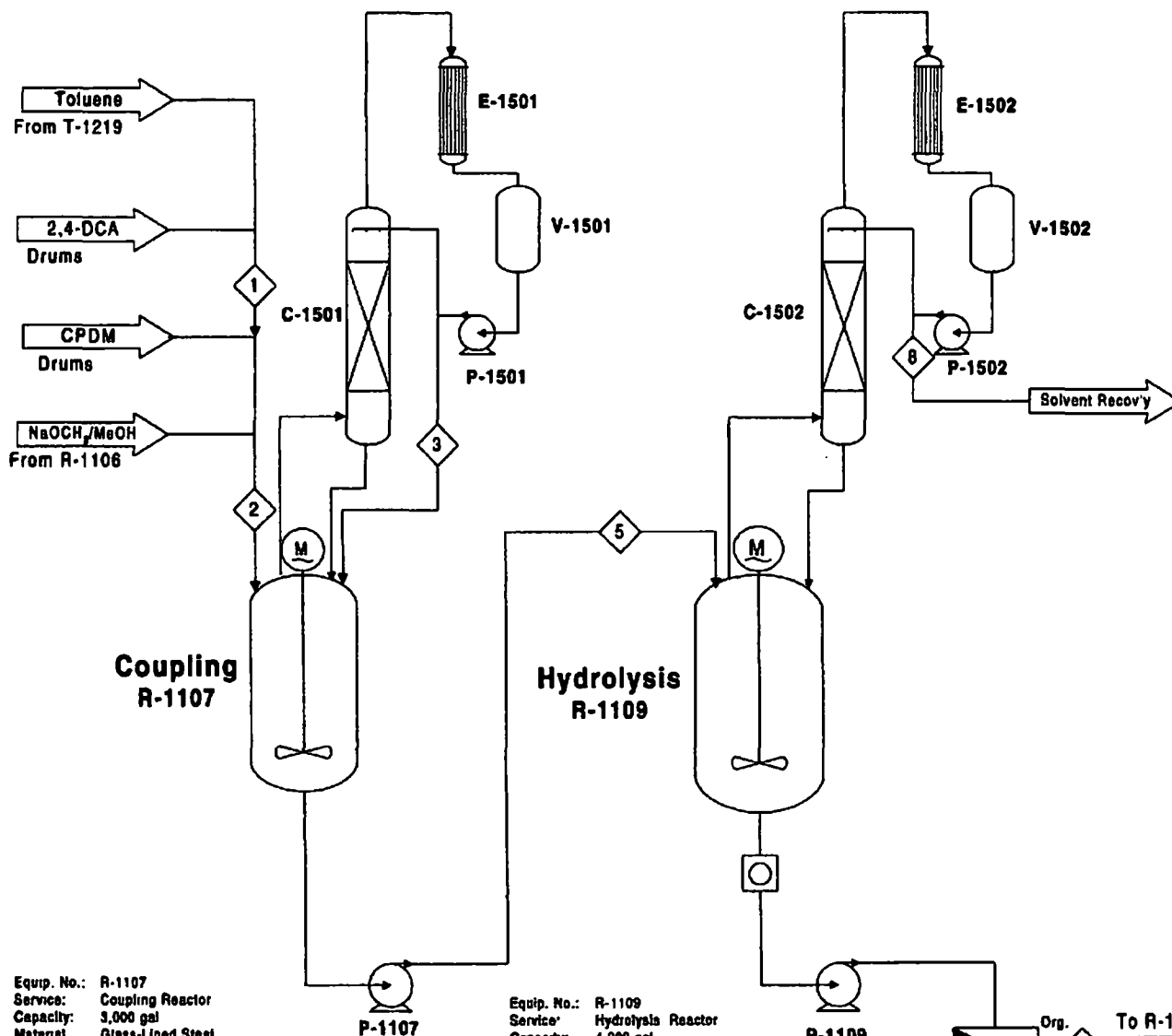
The minimum capital case assumes only one centrifuge is in operation and the cycle time is at least as good as the Degussa process. The capital required for this case is \$809k with a productivity of 0.6 MT/d.

The maximum productivity case installs a second centrifuge—both which operate with cycle times at least as good as the Degussa process. The capital required for this case is \$1.17M with a productivity of 1.2 MT/d.

Installation of yet a third centrifuge is possible but deemed too expensive for the product to bear for the increased productivity.

Please note that the cost estimates are $\pm 40\%$ basis.

***Minimum
Capital
Option***



Equip. No.: R-1107
 Service: Coupling Reactor
 Capacity: 3,000 gal
 Material: Glass-Lined Steel
 HP: N/A
 RPM: N/A
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: P-1107 (NEW)
 Service: Coupling Transfer
 Capacity: 150 gpm @ 70' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: 400°F
 Rated Pressure: TBD

Equip. No.: R-1109
 Service: Hydrolysis Reactor
 Capacity: 4,000 gal
 Material: Hastelloy C
 HP: N/A
 RPM: N/A
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: P-1109
 Service: Hydrolysis Transfer
 Capacity: 300 gpm @ 94' TDH
 Material: Hastelloy C
 HP: <>
 RPM: <>
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: C-1501 (NEW)
 Service: Coupling Column
 Capacity: 24" dia x 10' T/T
 Material: 316L SS
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No.: E-1501 (NEW)
 Service: Coupling Condenser
 Capacity: 300 sq. ft.
 Material: 316LSS tube/CS shell
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No.: V-1501 (NEW)
 Service: Coupling Receiver
 Capacity: 350 gal
 Material: 316L SS
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No.: P-1501 (NEW)
 Service: Coupling Recvr Pump
 Capacity: 30 gpm @ 40' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: C-1502 (NEW)
 Service: Coupling Column
 Capacity: 24" dia x 10' T/T
 Material: 316L SS
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No.: E-1502 (NEW)
 Service: Coupling Condenser
 Capacity: 300 sq. ft.
 Material: 316LSS tube/CS shell
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No.: V-1502 (NEW)
 Service: Coupling Receiver
 Capacity: 350 gal
 Material: 316L SS
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No.: P-1502 (NEW)
 Service: Coupling Recvr Pump
 Capacity: 30 gpm @ 40' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: <>°F
 Rated Pressure: <>psig



Title: Cyclanilide 90946 Process Flow Diagram
 Page 1 of 4 Pages

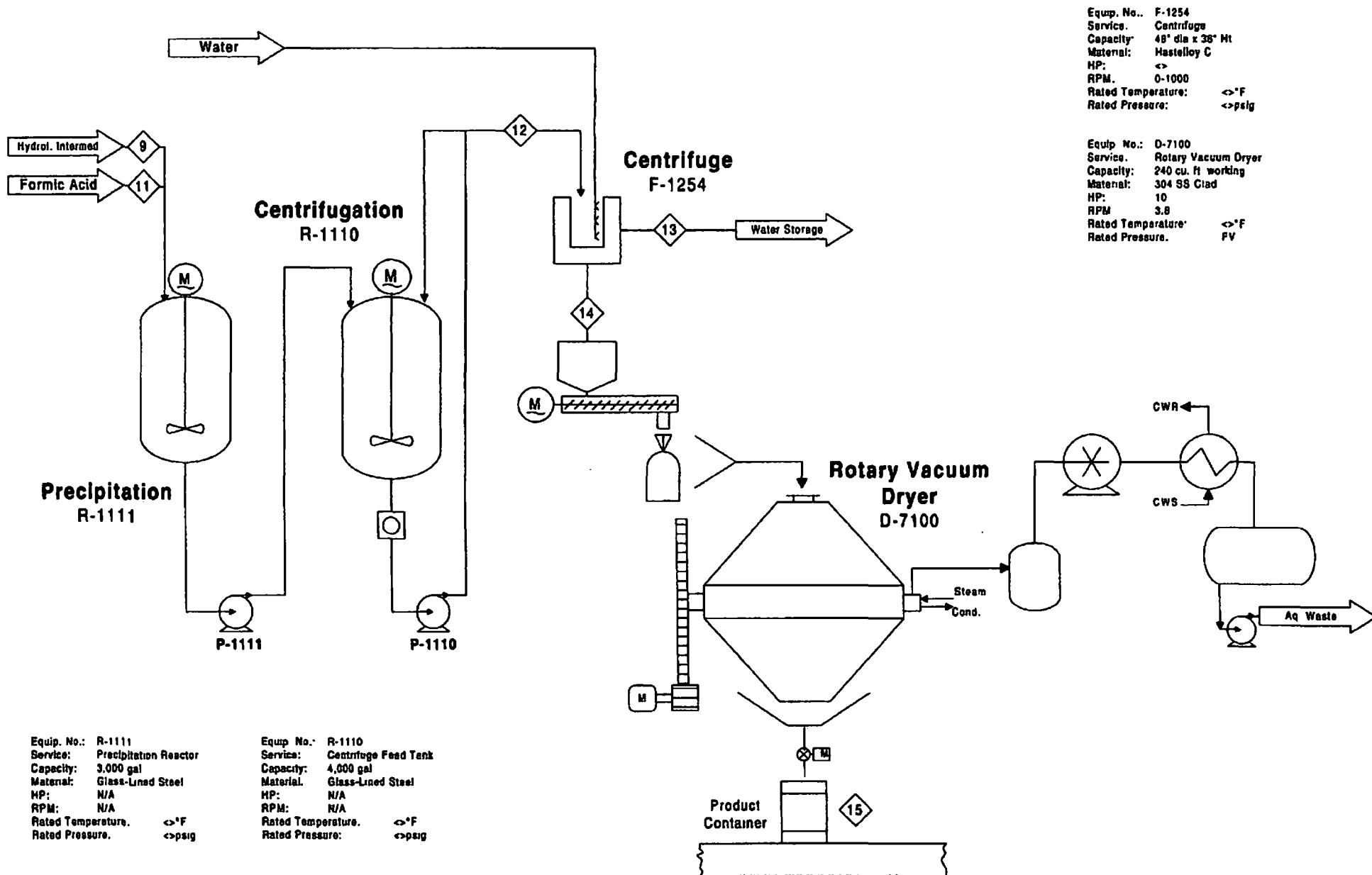
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Equip. No.: F-1254
 Service: Centrifuge
 Capacity: 48" dia x 38" Ht
 Material: Hastelloy C
 HP: <>
 RPM: 0-1000
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: D-7100
 Service: Rotary Vacuum Dryer
 Capacity: 240 cu. ft working
 Material: 304 SS Clad
 HP: 10
 RPM: 3.8
 Rated Temperature: <>°F
 Rated Pressure: FV

Equip. No.: R-1111
 Service: Precipitation Reactor
 Capacity: 3,000 gal
 Material: Glass-Lined Steel
 HP: N/A
 RPM: N/A
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: R-1110
 Service: Centrifuge Feed Tank
 Capacity: 4,000 gal
 Material: Glass-Lined Steel
 HP: N/A
 RPM: N/A
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: P-1111 (NEW)
 Service: Precipitation Transfer
 Capacity: 150 gpm @ 70' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: 400°F
 Rated Pressure: TBD

Equip. No.: P-1110
 Service: Centrif. Feed Pump
 Capacity: 150 gpm @ 73' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: 400°F
 Rated Pressure: TBD



Title: Cyclanilide 90946 Process Flow Diagram
 Page 2 of 4 Pages

Drawn:
DCG

Scale:
None

Date:
03/15/00

Rev:
B

AB0000088010

Aventis: Cyclanilide-Huls Technology Basis--One (1) Centrifuge Option
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./plow
5. Dryer discharge at 0.5% LOD
6. All Yield calculations based on DCA
7. ---
8. ---
9. ---
10. ---

Summary of Results

Final Product lb/bx: 2,936 lb
 Limiting Cycle Time: 55.4 hours
 Final Product lb/day: 1,271 lb/day
 Final Product MT/day: 0.6 MT/day

Stream No.		R-1107		R-1109		R-1109		R-1111		R-1111			
Description		1	2	3	4	5	6	7	8	9	10	11	
		Premix Initial Charge	R-7 Charge + Premix	MeOH Strip	O/H Charged Back	Intermed Xferred to R-9	R-9 Water Charge	R-9 Hydr. Intermediate	MeOH Distillat'n	Intermed. Xferred to R-11	Hydrol. Org. Phase to Rec'y	R-11 Acid Charge	
Component	MW												
Raw Materials													
CPDM	158.10		2,292.8										
2,4 DCA	162.00	2,292.8	2,292.8										
NaOCH3	54.00		866.7										
MeOH	32.00		2,022.3										
H2O	18.00						11,464.0	11,464.0		11,464.0			
NaOH	40.00							232.3					
Formic Acid	46.03											1,146.4	
Xylene	106.17	3,439.2	11,750.6	160.5	160.5	11,750.6		11,750.6			11,750.6		
(By) Products													
Na-CPMPA	310.10					4,339.8							
MeOH	32.00			3,049.4	3,049.4	3,049.4		447.8	447.8				
Na-RPA 90946	296.10							4,040.2		4,040.2			
RPA 90946	274.10												
NaCHO2	68.01												
Others													
Stream Weight, lb/batch		5,732.0	19,225.2	3,209.9	3,209.9	19,139.8	11,464.0	27,935.1	447.8	15,504.3	11,750.6	1,146.4	
Stream Volume, gal (ft3)		783.8	2,442.3	484.6	385.3	2,703.2	1,376.2	3,457.3	67.9	1,918.8	1,623.3	116.6	
Temperature, °F		100.0	136.0	146.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0	77.0	
Pressure, psia (torr)		14.7	14.7	(270)	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	
Density, g/cc (lb/ft3)		0.87	0.95	0.80	1.00	0.85	1.00	0.97	0.79	0.97	0.87	1.18	
Viscosity, cP (cSt)													
Molar Yield (Overall)						96.5%		97.5%					
Reactor Nom. Volume (gal):			3,000.0			3,000.0			4,000.0			3,000.0	
Reactor Filled Percentage:			81%			90%			86%			64%	

Aventis: Cyclanilide-Huls Techn
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./pl
5. Dryer discharge at 0.5% LOD

		R-1110	CF:F1254	D-7100	Packout	Solvent Recovery		Water Recovery		Waste Streams	
Stream No.		12	13	14	15	16	17	18	19	20	21
Description		Precipit'd Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Xylene to Recycle	Recycled Toluene	Water to Recycle	Recycled Water	Organic Waste	Aqueous Waste
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH ₃	54.00										
MeOH	32.00										
H ₂ O	18.00	11,464.0	11,935.3	1,099.6	18.2	1.8		13,034.9	12,736.0	1.8	298.9
NaOH	40.00										
Formic Acid	46.03										
Xylene	106.17					11,750.6	8,345.7			3,405.0	
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00									6,546.7	
Na-RPA 90946	296.10										
RPA 90946	274.10	3,665.2		3,646.9	2,917.5						
NaCHO ₂	68.01	1,693.8	1,693.8					1,693.8			1,693.8
Others	---					364.7				364.7	
Stream Weight, lb/batch		16,823.0	13,629.1	4,746.5	2,935.8	12,117.1	8,345.7	14,728.6	12,736.0	10,318.1	1,992.7
Stream Volume, gal (ft ³)		2,082.0	1,558.2			1,678.4	1,156.0	1,637.2	1,528.9	1,515.6	208.0
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0	68.0	68.0
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft ³)		0.97	1.05			0.87	0.87	1.08	1.00	0.82	1.15
Viscosity, cP (cSt)											
Molar Yield (Overall)		98.0%			(92.2%)						

Reactor Nom. Volume (gal): 4,000.0
 Reactor Filled Percentage: 52%

Aventis: Cyclanilide--Huls Technology Basis--One (1) Centrifuge Option
Cycle Time Analysis

		Step Cycle Time	Vessel Cycle Time	Rate Limiting Time 55.4 hours
Premix Prep (R-1107)	Charge Toluene Charge 2,4 DCA Mix/Hold	0.5 1.3 [Drum] 1.0	$\Sigma = 2.8$	Total Batch Time Req'd 91.8 hours
Coupling Reaction (R-1107)	Charge Premix Draw Vacuum Heat to 56-59°C Charge Na Methoxide Distill MeOH/Toluene Azeotrope Cool to 60-65°C Charge Water Transfer to Hydrolysis Rxtr	0.4 0.3 0.8 3.0 2.0 1.0 0.0 1.5	$\Sigma = 9.0$	Notes: nn.n indicates calculated value, otherwise value is estimated
Hydrolysis Reaction (R-1109)	Charge Water Heat/Reflux Distill MeOH Cool Rxtr <50°C Sample/NaOH Adjust Phase Separate / Transfer	1.5 3.0 2.5 1.0 0.0 2.0	$\Sigma = 10.0$	
Precipitation (R-1111)	Cool <25°C Charge Formic Acid Mix Sample/Results Transfer	1.0 3.0 0.5 0.5 0.5	$\Sigma = 6.0$	
Centrifugation (R-1110, F-1254)	Centrifuge Batch	55.4	$\Sigma = 55.4$ (100 kg plow per 8 hrs)	
Drying	Charge 1.5 batches Dry Batch Packout	1.0 6.0 1.5	$\Sigma = 8.5$	

COST ESTIMATE SUMMARY

PROJECT:

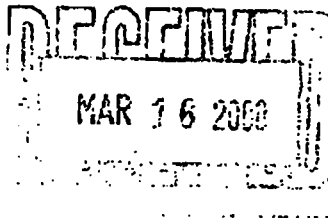
CYCLANILIDE

PROJECT ENGINEER:

M. REINSAGER

LABOR RATE:

\$35.00



PAGE

1 of 3

DATE:

16-Mar-00

REV.

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
1.0 SITE WORK							
DEMOLITION	2	LOT	80.00	160	\$5,600.00	\$1,500.00	\$7,100.00
PAVING		SF					\$0.00
CONCRETE		YD	15.00	0	\$0.00	\$0.00	\$0.00
DRAINAGE		LOT	80.00	0	\$0.00	\$0.00	\$0.00
EARTHWORK		YD	15.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				160	\$5,600.00	\$1,500.00	\$7,100.00
2.0 CIVIL							
FOUNDATIONS	10	LOT	40.00	400	\$14,000.00	\$5,000.00	\$19,000.00
STRUCTURAL (GALVANIZED)	25000	WT	0.04	1000	\$35,000.00	\$18,750.00	\$53,750.00
PIPE RACKS	5000	WT	0.08	375	\$13,125.00	\$3,750.00	\$16,875.00
STRUCTURAL PAINTING		FT^2	0.03	0	\$0.00	\$0.00	\$0.00
GRATING	2000	FT^2	0.20	400	\$14,000.00	\$20,000.00	\$34,000.00
SUBTOTAL				2175	\$76,125.00	\$47,600.00	\$123,625.00
3.0 REACTORS (COILED/JACKETED)							
300 GALLON GLASS		EA					\$0.00
500 GALLON GLASS		EA					\$0.00
1000 GALLON GLASS		EA					\$0.00
2000 GALLON GLASS		EA	35.00	0	\$0.00	\$0.00	\$0.00
3000 GALLON GLASS		EA	40.00	0	\$0.00	\$0.00	\$0.00
4000 GALLON GLASS		EA	40.00	0	\$0.00	\$0.00	\$0.00
COLUMN (10FT)	1	EA	120.00	120	\$4,200.00	\$7,000.00	\$11,200.00
COLUMNS (10 FT PACKED)	2	EA	80.00	160	\$5,600.00	\$40,000.00	\$45,600.00
RELOCATED VESSELS		EA	40.00	0	\$0.00	\$0.00	\$0.00
REACTOR SUPPORTS/STEEL	1	EA	110.00	110	\$3,850.00	\$1,500.00	\$5,350.00
REACTOR REPAIR/MODIFICATION		EA	110.00	0	\$0.00	\$0.00	\$0.00
VESSEL INSULATION		SF	0.70	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				390	\$13,650.00	\$48,500.00	\$62,150.00
4.0 VESSELS/TANKS							
VESSEL REPAIRS		EA	25.00	0	\$0.00	\$0.00	\$0.00
HOPPER SS		EA	40.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (2000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (6000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (8000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (15000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (12000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (8000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
API, SS (12000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
API, SS (16000 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
API, SS (1500 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
MOLE SEIVE	1	EA	60.00	60	\$2,100.00	\$8,000.00	\$10,100.00
VESSEL, SS (400 GAL)	4	EA	80.00	320	\$11,200.00	\$28,000.00	\$39,200.00
VESSEL, SS (1500 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
VESSEL, SS (5000 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
VESSEL INSULATION		SF	0.70	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				380	\$13,300.00	\$36,000.00	\$49,300.00

AB0000088010

PAGE 2 of 3

DATE: 16-Mar-00

REV.

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
5.0 HEAT EXCHANGERS							
CARBATE (50 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE, TFE IMP. (100 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE (200 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE, TFE IMP. (500 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE (1000 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, HAST, (1000 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, SS (60 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, SS (350 FT^2)	3	EA	60.00	180	\$6,300.00	\$24,000.00	\$30,300.00
TUBE/SHELL, SS (600 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
COOLING TOWERS		EA	350.00	0	\$0.00	\$0.00	\$0.00
CL2 VAPORIZER		EA	60.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				180	\$6,300.00	\$24,000.00	\$30,300.00
6.0 ROTATING EQUIPMENT							
PUMPS (50 GPM)	2	EA	160.00	320	\$11,200.00	\$18,000.00	\$29,200.00
PUMPS (350 GPM)	1	EA	40.00	40	\$1,400.00	\$12,000.00	\$13,400.00
PUMPS (100 GPM), TFE LINED BLOWER		EA	40.00	0	\$0.00	\$0.00	\$0.00
SCREW CONVEYOR	1	EA	80.00	80	\$2,800.00	\$5,000.00	\$7,800.00
VAC PUMP, AUTO SS		EA	80.00	0	\$0.00	\$0.00	\$0.00
NUTSHE		EA	120.00	0	\$0.00	\$0.00	\$0.00
AGITATOR - HAST-C		EA	80.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				440	\$15,400.00	\$35,000.00	\$50,400.00
7.0 FILTERING EQUIPMENT							
CARTRIDGE FILTER		EA	20.00	0	\$0.00	\$0.00	\$0.00
CARTRIDGE		EA					\$0.00
FUNDA (105 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
CENTRIFUGE - BASKET (HAST-C)		EA	120.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				0	\$0.00	\$0.00	\$0.00
8.0 PIPING							
PIPING (1-2 IN), TFE/CS		LF	1.40	0	\$0.00	\$0.00	\$0.00
PIPING (3-6 IN), TFE/CS		LF	1.70	0	\$0.00	\$0.00	\$0.00
PIPING (8-12 IN),SS		LF	2.70	0	\$0.00	\$0.00	\$0.00
PIPING (.5-.75 IN), SS		LF	0.70	0	\$0.00	\$0.00	\$0.00
PIPING (1-2 IN), SS	900	LF	1.20	1080	\$37,800.00	\$11,700.00	\$49,500.00
PIPING (3-6 IN), SS	120	LF	2.50	300	\$10,500.00	\$2,640.00	\$13,140.00
PIPING (4-6 IN), CS		LF	1.50	0	\$0.00	\$0.00	\$0.00
PIPING (.5-.75 IN), CS	200	LF	0.70	140	\$4,900.00	\$1,200.00	\$6,100.00
PIPING (1-2 IN), CS	100	LF	1.00	100	\$3,500.00	\$700.00	\$4,200.00
		LF	2.00	0	\$0.00	\$0.00	\$0.00
PIPING (2-4 IN), FIBERCAST		LF	2.00	0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (3/4-1 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (1-2 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - CS (.75 IN)	20	EA		0	\$0.00	\$2,000.00	\$2,000.00
VALVES - CS (1-2 IN)	10	EA		0	\$0.00	\$1,500.00	\$1,500.00
VALVES - CS (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - SS (3-6 IN)	2	EA		0	\$0.00	\$1,200.00	\$1,200.00
VALVES - EXOTIC		EA		0	\$0.00	\$0.00	\$0.00

COST ESTIMATE SUMMARY

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PROJECT: CYCLANILIDE

DATE 16-Mar-00

PROJECT ENGINEER

M REINSAGER

REV

LABOR RATE

\$32.00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
VALVES - SS (1-2 IN)	25	EA		0		\$0.00	\$6,250.00
VALVES - SS (4-6 IN)		EA		0		\$0.00	\$0.00
FITTINGS TFE (1-2 IN)		EA		0		\$0.00	\$0.00
FITTINGS TFE (3-6 IN)		EA		0		\$0.00	\$0.00
INSULATION (2-4 IN)	100	LF	0.40	40	\$1,400.00	\$1,000.00	\$2,400.00
PAINTING		LF	0.20	0	\$0.00	\$0.00	\$0.00
PSV		EA	5.00	0	\$0.00	\$0.00	\$0.00
RUPTURE DISC		EA	5.00	0	\$0.00	\$0.00	\$0.00
STEAM TRACING/INS.	150	LF	0.50	75	\$2,625.00	\$1,200.00	\$3,825.00
PIPING MISC (HANGERS ETC)	5	LOT	40.00	200	\$7,000.00	\$4,000.00	\$11,000.00
HOT WATER MIXER		LOT	20.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				1935	\$67,725.00	\$33,390.00	\$101,115.00
9.0 ELECTRIC/INSTRUMENTATION							
SCALE	1	EA	20.00	20	\$700.00	\$2,500.00	\$3,200.00
MOTOR (20-40 HP)	3	EA	24.00	72	\$2,520.00	\$4,500.00	\$7,020.00
WIRING/CONDUIT/TRAY	500	LF	0.70	350	\$12,250.00	\$6,000.00	\$18,250.00
FLOW INST (MICRO-MOTION)	4	EA	48.00	192	\$6,720.00	\$20,000.00	\$26,720.00
FLOW INSTRUMENTS		EA	10.00	0	\$0.00	\$0.00	\$0.00
PRESSURE INSTRUMENTS/CTRL		EA	50.00	0	\$0.00	\$0.00	\$0.00
LEVEL INSTRUMENTS	4	EA	42.00	168	\$5,880.00	\$6,000.00	\$11,880.00
GUAUGES	10	EA	0.80	8	\$280.00	\$750.00	\$1,030.00
TEMP INDICATOR	5	EA	2.00	10	\$350.00	\$1,000.00	\$1,350.00
CONTROL VALVES	4	EA	24.00	96	\$3,360.00	\$8,000.00	\$11,360.00
PRESSURE REGULATORS	2	EA	8.00	16	\$560.00	\$1,000.00	\$1,560.00
CONTROLLERS	4	EA	12.00	48	\$1,680.00	\$3,200.00	\$4,880.00
INTERLOCKS (MINIMAL)	6	EA	10.00	60	\$2,100.00	\$1,800.00	\$3,900.00
DCS EQUIPMENT/CONFIGURATION		EA	120.00	0	\$0.00	\$0.00	\$0.00
CONTROL ROOM/MCC		EA	650.00	0	\$0.00	\$0.00	\$0.00
ELECTRICAL MISC	2	LOT	120.00	240	\$8,400.00	\$4,000.00	\$12,400.00
SWITCHES	6	EA	10.00	60	\$2,100.00	\$1,200.00	\$3,300.00
SUBTOTAL				1340	\$46,800.00	\$59,950.00	\$106,850.00
10.0 INSPECTION/ENGINEERING							
VESSEL INSPECTIONS		EA			\$0.00		\$0.00
ENGINEERING/DCS CONFIG	15	LOT	40.00	600	\$21,000.00		\$21,000.00
DRAFTING/DESIGN	12	LOT	40.00	480	\$16,800.00		\$16,800.00
SUBTOTAL				1080	\$37,800.00	\$0.00	\$37,800.00
11.0 RENTALS							
CRANE	3	LOT				\$4,500.00	\$4,500.00
EQUIPMENT		LOT				\$0.00	\$0.00
FREIGHT (ALL ABOVE)	6	LOT				\$9,000.00	\$9,000.00
12.0 MISCELLANEOUS							
LAB EQUIPMENT		LOT				\$0.00	\$0.00
SUBTOTAL						\$9,000.00	\$9,000.00
SUBTOTAL				8080	\$282,800.00	\$294,840.00	\$577,640.00
OVERTIME (50%)							
CONTINGENCY (40%)					\$113,120.00	\$117,936.00	\$231,056.00
TOTAL					\$395,920.00	\$412,776.00	\$808,696.00

AB000008801C

***Maximum
Productivity
Option***

Toluene
From T-1219

2,4-DCA
Drums

CPDM
Drums

NaOCH₃/MeOH
From R-1106

Coupling
R-1107

Equip No. R-1107
Service Coupling Reactor
Capacity 3,000 gal
Material Glass-Lined Steel
HP N/A
RPM N/A
Rated Temperature 400°F
Rated Pressure 30 psig

Equip No. P-1107 (NEW)
Service Coupling Transfer
Capacity 150 gpm @ 70' TDH
Material 316 SS
HP TBD
RPM TBD
Rated Temperature 400°F
Rated Pressure TBD

Equip No. R-1109
Service Hydrolysis Reactor
Capacity 4,000 gal
Material Hastelloy C
HP N/A
RPM N/A
Rated Temperature 400°F
Rated Pressure 30 psig

Equip No. P-1109
Service Hydrolysis Transfer
Capacity 300 gpm @ 94' TDH
Material Hastelloy C
HP 0
RPM 0
Rated Temperature 400°F
Rated Pressure 30 psig

Equip No. C-1501 (NEW)
Service Coupling Column
Capacity 24" dia x 10' T/T
Material 316L SS
HP N/A
RPM N/A
Rated Temperature 400°F
Rated Pressure 30 psig & FV

Equip No. E-1501 (NEW)
Service Coupling Condenser
Capacity 300 sq ft
Material 316LSS tube/CS shell
HP N/A
RPM N/A
Rated Temperature 400°F
Rated Pressure 30 psig & FV

Equip No. V-1501 (NEW)
Service Coupling Receiver
Capacity 350 gal
Material 316L SS
HP N/A
RPM N/A
Rated Temperature 400°F
Rated Pressure 30 psig & FV

Equip No. P-1501 (NEW)
Service Coupling Recr Pump
Capacity 30 gpm @ 40' TDH
Material 316 SS
HP TBD
RPM TBD
Rated Temperature 400°F
Rated Pressure 30 psig

Equip No. C-1502 (NEW)
Service Coupling Column
Capacity 24" dia x 10' T/T
Material 316L SS
HP N/A
RPM N/A
Rated Temperature 400°F
Rated Pressure 30 psig & FV

Equip No. E-1502 (NEW)
Service Coupling Condenser
Capacity 300 sq ft
Material 316LSS tube/CS shell
HP N/A
RPM N/A
Rated Temperature 400°F
Rated Pressure 30 psig & FV

Equip No. V-1502 (NEW)
Service Coupling Receiver
Capacity 350 gal
Material 316L SS
HP N/A
RPM N/A
Rated Temperature 400°F
Rated Pressure 30 psig & FV

Equip No. P-1502 (NEW)
Service Coupling Recr Pump
Capacity 30 gpm @ 40' TDH
Material 316 SS
HP TBD
RPM TBD
Rated Temperature 400°F
Rated Pressure 30 psig



Title: Cyclanilide 90946 Process Flow Diagram
Page 1 of 4 Pages

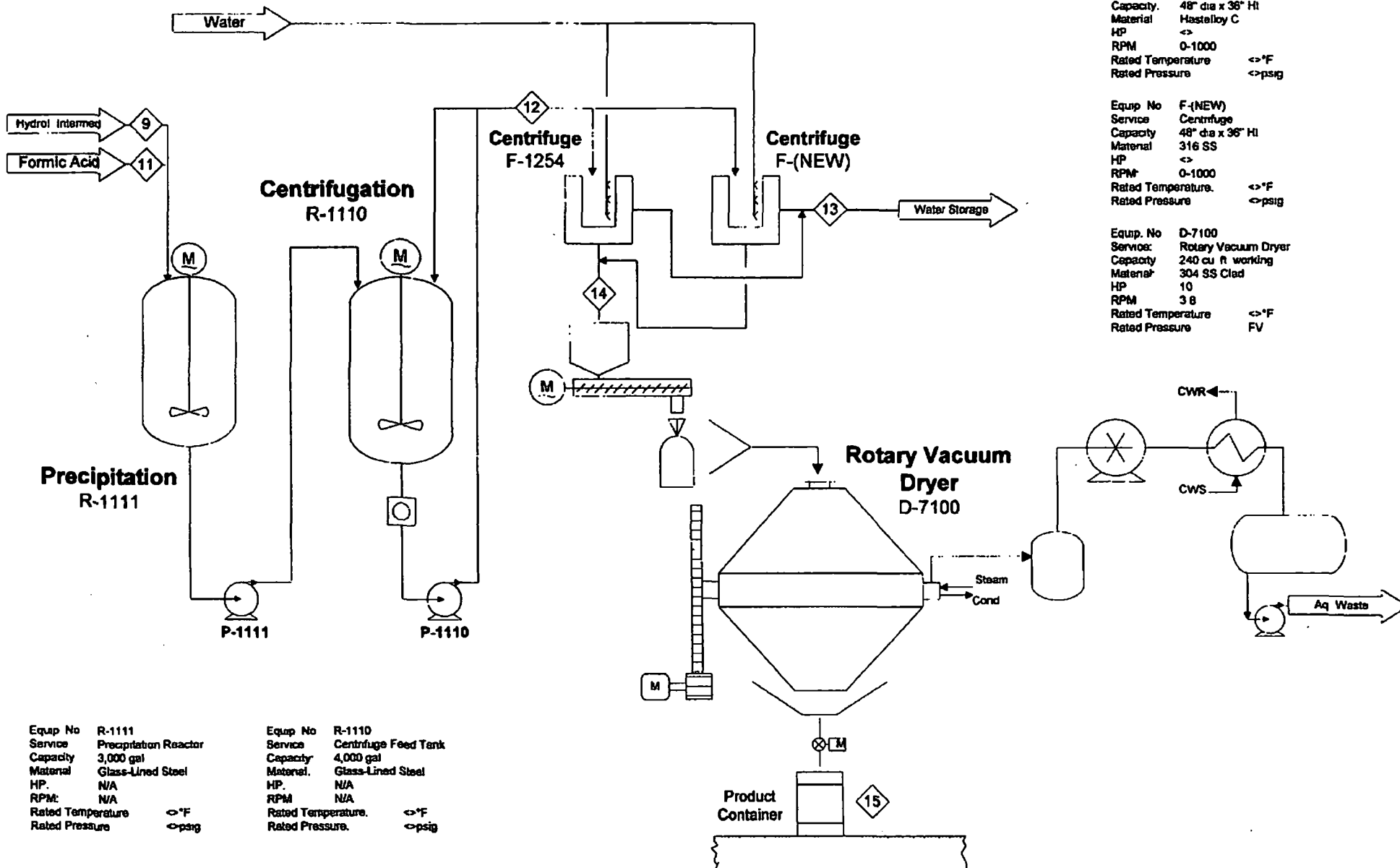
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DCG

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Date:
03/15/00

Rev:
B

AB0000088010



Equip. No F-1254
 Service Centrifuge
 Capacity 48" dia x 36" Ht
 Material Hastelloy C
 HP <>
 RPM 0-1000
 Rated Temperature <>*F
 Rated Pressure <>psig

Equip. No F-(NEW)
 Service Centrifuge
 Capacity 48" dia x 36" Ht
 Material 316 SS
 HP <>
 RPM 0-1000
 Rated Temperature <>*F
 Rated Pressure <>psig

Equip. No D-7100
 Service Rotary Vacuum Dryer
 Capacity 240 cu ft working
 Material 304 SS Clad
 HP 10
 RPM 38
 Rated Temperature <>*F
 Rated Pressure FV

Equip No R-1111
 Service Precipitation Reactor
 Capacity 3,000 gal
 Material Glass-Lined Steel
 HP N/A
 RPM N/A
 Rated Temperature <>*F
 Rated Pressure <>psig

Equip No R-1110
 Service Centrifuge Feed Tank
 Capacity 4,000 gal
 Material Glass-Lined Steel
 HP N/A
 RPM N/A
 Rated Temperature <>*F
 Rated Pressure <>psig

Equip No P-1111 (NEW)
 Service Precipitation Transfer
 Capacity 150 gpm @ 70 TDH
 Material 316 SS
 HP TBD
 RPM TBD
 Rated Temperature 400°F
 Rated Pressure TBD

Equip No P-1110
 Service Centrif. Feed Pump
 Capacity 150 gpm @ 73' TDH
 Material 316 SS
 HP TBD
 RPM TBD
 Rated Temperature 400°F
 Rated Pressure TBD



Title: Cyclanilide 90946 Process Flow Diagram
 Page 2 of 4 Pages

Drawn:
 DCG

Scale:
 None

Date:
 03/15/00

Rev:
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AB0000088010

Aventis: Cyclanilide-Huls Technology Basis—Two (2) Centrifuge Option
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./plow
5. Dryer discharge at 0.5% LOD

6. All Yield calculations based on DCA

7. ---

8. ---

9. ---

10. ---

R-1107

R-1109

R-1111

Summary of Results

Final Product lb/bx: 2,936 lb
 Limiting Cycle Time: 27.7 hours
 Final Product lb/day: 2,543 lb/day
 Final Product MT/day: 1.2 MT/day

Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Premix Initial Charge	R-7 Charge + Premix	MeOH Strip	O/H Charged Back	Intermed Xferred to R-9	R-9 Water Charge	R-9 Hydr. Intermediate	MeOH Distillat'n	Intermed. Xferred to R-11	Hydrol. Org. Phase to Rec'y	R-11 Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		2,292.8									
2,4 DCA	162.00	2,292.8	2,292.8									
NaOCH ₃	54.00		866.7									
MeOH	32.00		2,022.3									
H ₂ O	18.00						11,464.0	11,464.0		11,464.0		
NaOH	40.00							232.3				
Formic Acid	46.03											1,146.4
Xylene	106.17	3,439.2	11,750.6	160.5	160.5	11,750.6		11,750.6			11,750.6	
(By) Products												
Na-CPMPA	310.10					4,339.8						
MeOH	32.00			3,049.4	3,049.4	3,049.4		447.8	447.8			
Na-RPA 90946	286.10							4,040.2		4,040.2		
RPA 90946	274.10											
NaCHO ₂	68.01											
Others	---											
Stream Weight, lb/batch		5,732.0	19,225.2	3,209.9	3,209.9	19,139.8	11,464.0	27,935.1	447.8	15,504.3	11,750.6	1,146.4
Stream Volume, gal (ft ³)		793.8	2,442.3	484.6	385.3	2,703.2	1,376.2	3,457.3	67.9	1,918.8	1,623.3	116.6
Temperature, °F		100.0	136.0	146.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia (torr)		14.7	14.7	(270)	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft ³)		0.87	0.95	0.80	1.00	0.85	1.00	0.97	0.79	0.97	0.87	1.18
Viscosity, cP (cSt)												
Molar Yield (Overall)						96.5%		97.5%				
Reactor Nom. Volume (gal):			3,000.0			3,000.0		4,000.0		3,000.0		
Reactor Filled Percentage:			81%			90%		86%		64%		

Aventis: Cyclanilide-Huls Techn
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./pl
5. Dryer discharge at 0.5% LOD

		R-1110	CF:F1254	D-7100	Packout	Solvent Recovery		Water Recovery		Waste Streams	
Stream No.		12	13	14	15	16	17	18	19	20	21
Description		Precipit'd Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Xylene to Recycle	Recycled Toluene	Water to Recycle	Recycled Water	Organic Waste	Aqueous Waste
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH3	54.00										
MeOH	32.00										
H2O	18.00	11,464.0	11,935.3	1,099.6	18.2	1.8		13,034.9	12,736.0	1.8	298.9
NaOH	40.00										
Formic Acid	46.03										
Xylene	106.17					11,750.6	8,345.7			3,405.0	
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00									6,546.7	
Na-RPA 90946	296.10										
RPA 90946	274.10	3,665.2		3,646.9	2,917.5						
NaCHO2	68.01	1,693.8	1,693.8					1,693.8			1,693.8
Others	—					364.7				364.7	
Stream Weight, lb/batch		16,823.0	13,629.1	4,746.5	2,935.8	12,117.1	8,345.7	14,728.6	12,736.0	10,318.1	1,992.7
Stream Volume, gal (ft3)		2,082.0	1,558.2			1,678.4	1,156.0	1,637.2	1,528.9	1,515.6	208.0
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0	68.0	68.0
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.97	1.05			0.87	0.87	1.08	1.00	0.82	1.15
Viscosity, cP (cSt)											
Molar Yield (Overall)		98.0%			(92.2%)						

Reactor Nom. Volume (gal): 4,000.0
 Reactor Filled Percentage: 52%

Aventis: Cyclanilide—Huls Technology Basis—Two (2) Centrifuge Option

Cycle Time Analysis

		Step Cycle Time	Vessel Cycle Time	Rate Limiting Time 27.7 hours
Premix Prep (R-1107)	Charge Toluene	0.5		
	Charge 2,4 DCA	1.3 [Drum]		
	Mix/Hold	1.0	Σ = 2.8	Total Batch 64.1 hours Time Req'd
Coupling Reaction (R-1107)	Charge Premix	0.4		
	Draw Vacuum	0.3		
	Heat to 56-59°C	0.8		
	Charge Na Methoxide	3.0		
	Distill MeOH/Toluene Azeotrope	2.0		
	Cool to 60-65°C	1.0		
	Charge Water	0.0		
	Transfer to Hydrolysis Rxtr	1.5	Σ = 9.0	Notes: nn.n indicates calculated value, otherwise value is estimated
Hydrolysis Reaction (R-1109)	Charge Water	1.5		
	Heat/Reflux	3.0		
	Distill MeOH	2.5		
	Cool Rxtr <50°C	1.0		
	Sample/NaOH Adjust	0.0		
	Phase Separate / Transfer	2.0	Σ = 10.0	
Precipitation (R-1111)	Cool <25°C	1.0		
	Charge Formic Acid	3.0		
	Mix	0.5		
	Sample/Results	0.5		
	Transfer	0.5	Σ = 6.0	
Centrifugation (R-1110, F-1254)	Centrifuge Batch	27.7	Σ = 27.7 (100 kg plow per 8 hrs)	
Drying	Charge 1.5 batches	1.0		
	Dry Batch	6.0		
	Packout	1.5	Σ = 8.5	

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COST ESTIMATE SUMMARY

PAGE 1 of 3

PROJECT: CYCLANILIDE V3 (CENTRIFUGE)

DATE: 16-Mar-00

PROJECT ENGINEER: M. REINSAGER

REV:

LABOR RATE: \$35.00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
1.0 SITE WORK							
DEMOLITION	4	LOT	80.00	320	\$11,200.00	\$3,000.00	\$14,200.00
PAVING		SF					\$0.00
CONCRETE	16	YD	15.00	240	\$8,400.00	\$1,760.00	\$10,160.00
DRAINAGE		LOT	80.00	0	\$0.00	\$0.00	\$0.00
EARTHWORK		YD	15.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				560	\$19,600.00	\$4,760.00	\$24,360.00
2.0 CIVIL							
FOUNDATIONS	10	LOT	40.00	400	\$14,000.00	\$5,000.00	\$19,000.00
STRUCTURAL (GALVANIZED)	38000	WT	0.04	1520	\$53,200.00	\$30,400.00	\$83,600.00
PIPE RACKS	6500	WT	0.08	488	\$17,062.50	\$4,875.00	\$21,937.50
STRUCTURAL PAINTING		FT^2	0.03	0	\$0.00	\$0.00	\$0.00
GRATING	1000	FT^2	0.20	200	\$7,000.00	\$10,000.00	\$17,000.00
SUBTOTAL				2608	\$91,262.50	\$50,275.00	\$141,537.50
3.0 REACTORS (COILED/JACKETED)							\$0.00
300 GALLON GLASS		EA					\$0.00
500 GALLON GLASS		EA					\$0.00
1000 GALLON GLASS		EA					\$0.00
2000 GALLON GLASS		EA	35.00	0	\$0.00	\$0.00	\$0.00
3000 GALLON GLASS		EA	40.00	0	\$0.00	\$0.00	\$0.00
4000 GALLON GLASS		EA	40.00	0	\$0.00	\$0.00	\$0.00
COLUMN (10FT)	1	EA	120.00	120	\$4,200.00	\$7,000.00	\$11,200.00
COLUMNS (10 FT PACKED)	2	EA	80.00	160	\$5,600.00	\$40,000.00	\$45,600.00
RELOCATED VESSELS		EA	40.00	0	\$0.00	\$0.00	\$0.00
REACTOR SUPPORTS/STEEL	1	EA	110.00	110	\$3,850.00	\$1,500.00	\$5,350.00
REACTOR REPAIR/MODIFICATION		EA	110.00	0	\$0.00	\$0.00	\$0.00
VESSEL INSULATION		SF	0.70	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				380	\$13,650.00	\$48,600.00	\$62,250.00
4.0 VESSELS/TANKS							
VESSEL REPAIRS		EA	25.00	0	\$0.00	\$0.00	\$0.00
HOPPER SS		EA	40.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (2000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (6000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (8000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (15000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (12000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (6000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
API, SS (12000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
API, SS (16000 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
API, SS (1500 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
MOLE SEIVE	1	EA	60.00	60	\$2,100.00	\$8,000.00	\$10,100.00
VESSEL, SS (400 GAL)	4	EA	80.00	320	\$11,200.00	\$28,000.00	\$39,200.00
VESSEL, SS (1500 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
VESSEL, SS (5000 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
VESSEL INSULATION		SF	0.70	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				380	\$13,300.00	\$36,000.00	\$49,300.00

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PAGE **2 of 3**

DATE: 16-Mar-00

REV.

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COST ESTIMATE SUMMARY

PAGE 3 of 3

PROJECT: CYCLANILIDE V3 (CENTRIFUGE)

DATE 16-Mar-00

PROJECT ENGINEER

M REINSAGER

REV

LABOR RATE

\$35.00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
VALVES - SS (1-2 IN)	35	EA		0	\$0.00	\$8,750.00	\$8,750.00
VALVES - SS (4-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
FITTINGS, TFE (1-2 IN)		EA		0	\$0.00	\$0.00	\$0.00
FITTINGS, TFE (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
INSULATION (2-4 IN)	100	LF	0.40	40	\$1,400.00	\$1,000.00	\$2,400.00
PAINTING		LF	0.20	0	\$0.00	\$0.00	\$0.00
PSV		EA	5.00	0	\$0.00	\$0.00	\$0.00
RUPTURE DISC		EA	5.00	0	\$0.00	\$0.00	\$0.00
STEAM TRACING/INS	150	LF	0.50	75	\$2,625.00	\$1,200.00	\$3,825.00
PIPING MISC (HANGERS, ETC)	8	LOT	40.00	320	\$11,200.00	\$6,400.00	\$17,600.00
HOT WATER MIXER		LOT	20.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				3020	\$105,700.00	\$48,950.00	\$154,650.00
9.0 ELECTRIC/INSTRUMENTATION							
SCALE	1	EA	20.00	20	\$700.00	\$2,500.00	\$3,200.00
MOTOR (20-40 HP)	4	EA	24.00	96	\$3,360.00	\$6,000.00	\$9,360.00
WIRING/CONDUIT/TRAY	800	LF	0.70	560	\$19,600.00	\$9,600.00	\$29,200.00
FLOW INST (MICRO-MOTION)	4	EA	48.00	192	\$6,720.00	\$20,000.00	\$26,720.00
FLOW INSTRUMENTS		EA	10.00	0	\$0.00	\$0.00	\$0.00
PRESSURE INSTRUMENTS/CTRL		EA	50.00	0	\$0.00	\$0.00	\$0.00
LEVEL INSTRUMENTS	4	EA	42.00	168	\$5,880.00	\$6,000.00	\$11,880.00
GAUGES	16	EA	0.80	13	\$448.00	\$1,200.00	\$1,648.00
TEMP INDICATOR	5	EA	2.00	10	\$350.00	\$1,000.00	\$1,350.00
CONTROL VALVES	8	EA	24.00	192	\$6,720.00	\$16,000.00	\$22,720.00
PRESSURE REGULATORS	2	EA	8.00	16	\$560.00	\$1,000.00	\$1,560.00
CONTROLLERS	4	EA	12.00	48	\$1,680.00	\$3,200.00	\$4,880.00
INTERLOCKS (MINIMAL)	8	EA	10.00	80	\$2,800.00	\$2,400.00	\$5,200.00
CENTRIFUGE CONTROL	1	EA	250.00	250	\$8,750.00	\$15,000.00	\$23,750.00
CONTROL ROOM/MCC		EA	650.00	0	\$0.00	\$0.00	\$0.00
ELECTRICAL MISC	4	LOT	160.00	640	\$22,400.00	\$12,000.00	\$34,400.00
SWITCHES	8	EA	10.00	80	\$2,800.00	\$1,600.00	\$4,400.00
SUBTOTAL				2365	\$82,768.00	\$97,500.00	\$180,268.00
10.0 INSPECTION/ENGINEERING							
VESSEL INSPECTIONS		EA			\$0.00		\$0.00
ENGINEERING/DCS CONFIG	20	LOT	40.00	800	\$28,000.00		\$28,000.00
DRAFTING/DESIGN	20	LOT	40.00	800	\$28,000.00		\$28,000.00
SUBTOTAL				1600	\$56,000.00	\$0.00	\$56,000.00
11.0 RENTALS							
CRANE	3	LOT				\$4,500.00	\$4,500.00
EQUIPMENT		LOT				\$0.00	\$0.00
FREIGHT (ALL ABOVE)	6	LOT				\$9,000.00	\$9,000.00
12.0 MISCELLANEOUS							
LAB EQUIPMENT		LOT				\$0.00	\$0.00
SUBTOTAL						\$9,000.00	\$9,000.00
SUBTOTAL				11782.3	\$412,380.50	\$423,985.00	\$836,365.50
OVERTIME (50%)							
CONTINGENCY (40%)					\$164,952.20	\$169,594.00	\$334,546.20
TOTAL					\$577,332.70	\$593,579.00	\$1,170,911.70



To:	Joe Mancini	Date:	3/17/00
Location:	Memphis Office	Copy to:	Chris McGee Kevin Payne Geoff Pratt Jim Rone
From:	D.C. Guffey		
Location:	Helena Plant		
Extension:	283		
Subject:	Cyclanilide Process		
Reference:			

Attached are the flowsheets (w/o recovery and emissions control drawings), material balance, and cost estimate for two Cyclanilide cases: 1) minimum capital and 2) maximum productivity. Please note the productivity numbers are greatly impacted by centrifuge cycle-time data obtained on the Degussa Hüls plant visit.

As you may recall, the Degussa centrifuge cycle is approximately eight (8) hours for a 300 kg batch with each centrifuge payload resulting in approximately 100 kg of wet (~17%) material. Further, the Degussa centrifuge is the same size as the Unit 1 centrifuge (and Unit 5) and operates at speeds typical to the Cedar centrifuge. This means the maximum productivity of the plant is 82.7 lb/hr or 1,984 lb/day (0.9 MT/d) at 100% OST. Taking into account yield and OST, the maximum productivity of the plant is then 1,272 lb/day (0.6 MT/d) regardless of how much crude material is produced in the reactors.

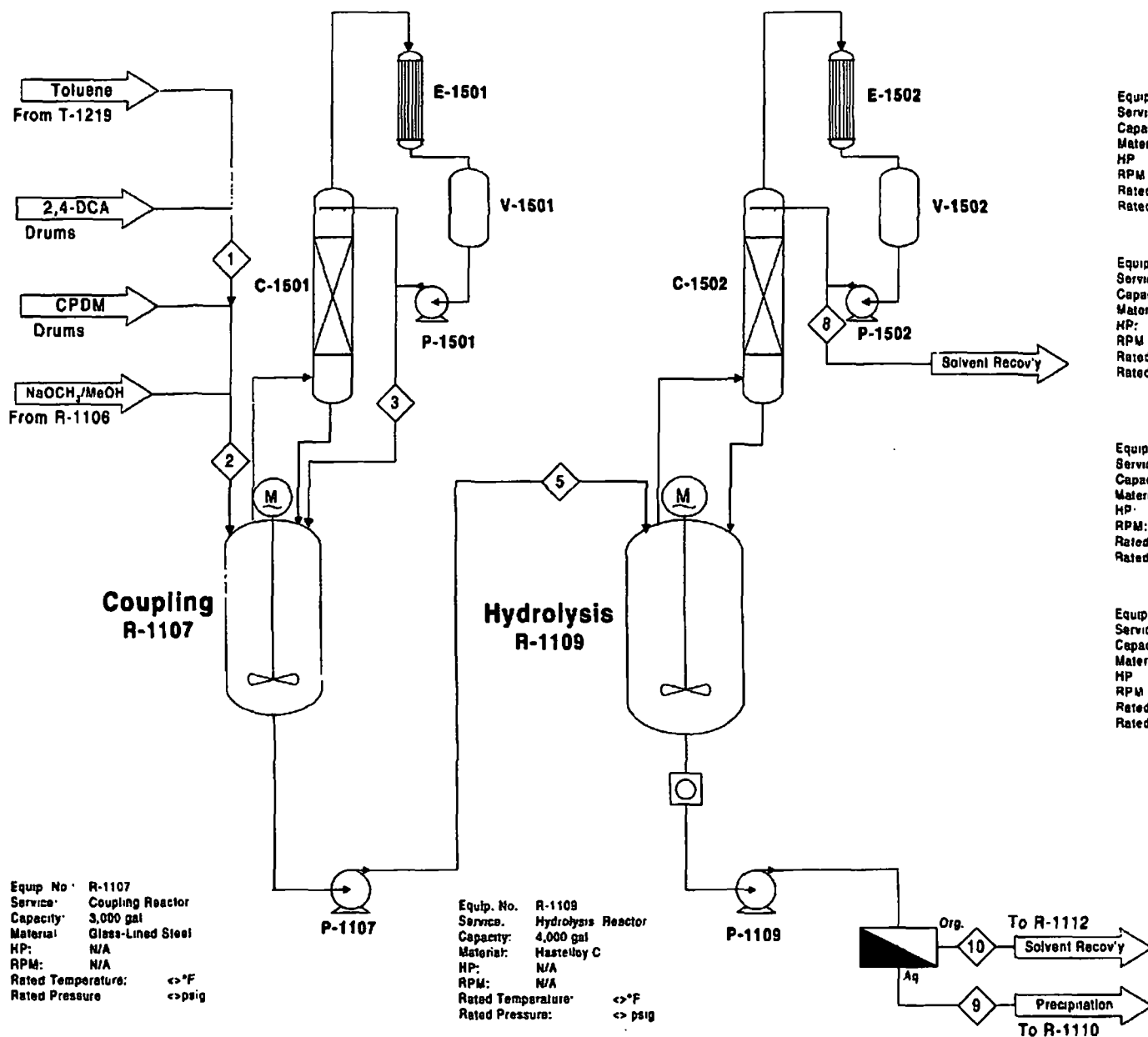
The minimum capital case assumes only one centrifuge is in operation and the cycle time is at least as good as the Degussa process. The capital required for this case is \$809k with a productivity of 0.6 MT/d.

The maximum productivity case installs a second centrifuge—both which operate with cycle times at least as good as the Degussa process. The capital required for this case is \$1.17M with a productivity of 1.2 MT/d.

Installation of yet a third centrifuge is possible but deemed too expensive for the product to bear for the increased productivity.

Please note that the cost estimates are $\pm 40\%$ basis.

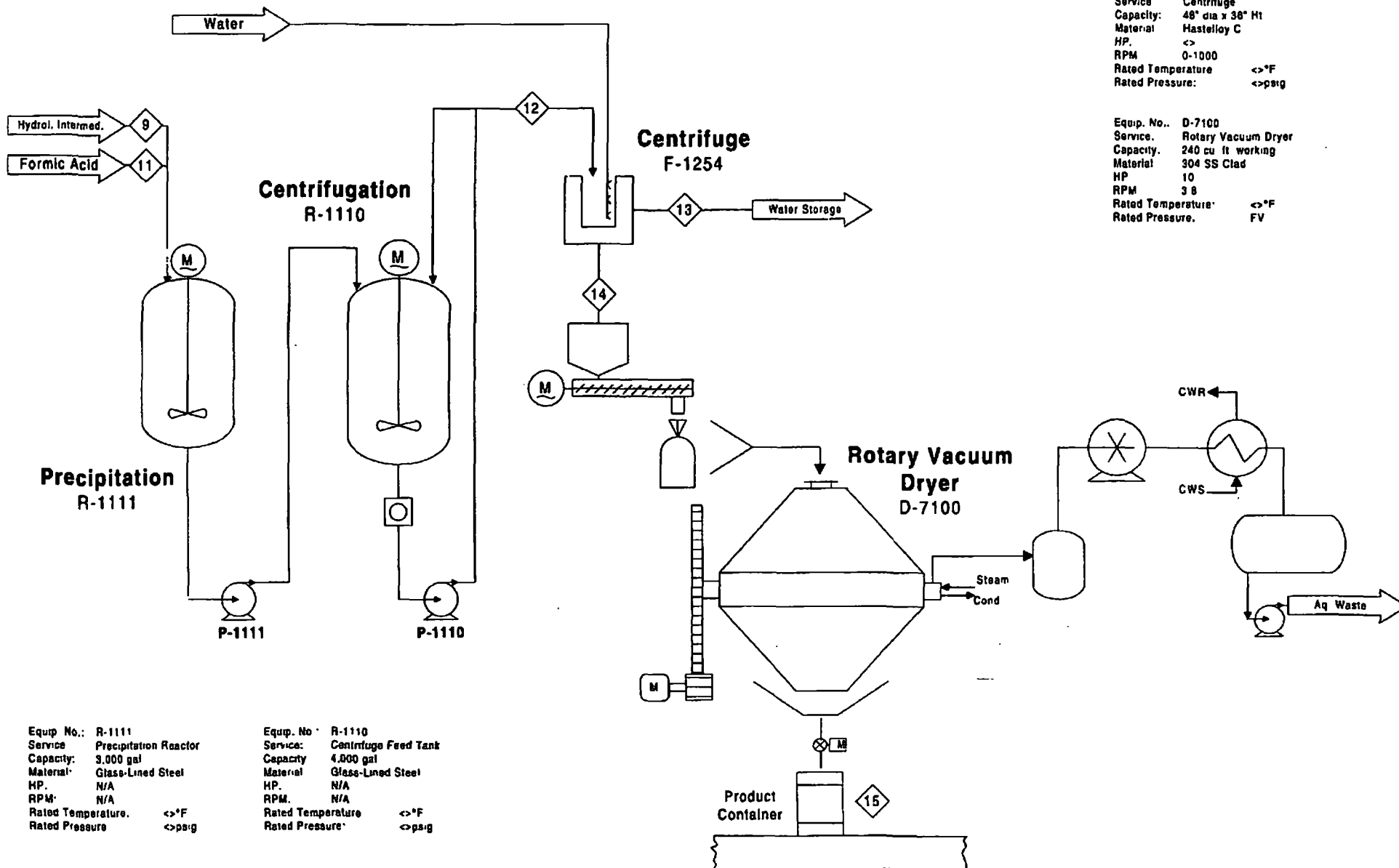
Minimum Capital Option



Title: Cyclanilide 90946 Process Flow Diagram
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Drawn: DCG	Scale: None	Date: 03/15/00	Rev: B
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Equip. No.: F-1254
 Service: Centrifuge
 Capacity: 48" dia x 36" Ht
 Material: Hastelloy C
 HP: <>
 RPM: 0-1000
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: D-7100
 Service: Rotary Vacuum Dryer
 Capacity: 240 cu ft working
 Material: 304 SS Clad
 HP: 10
 RPM: 38
 Rated Temperature: <>°F
 Rated Pressure: FV

Equip. No.: R-1111
 Service: Precipitation Reactor
 Capacity: 3,000 gal
 Material: Glass-Lined Steel
 HP: N/A
 RPM: N/A
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: R-1110
 Service: Centrifuge Feed Tank
 Capacity: 4,000 gal
 Material: Glass-Lined Steel
 HP: N/A
 RPM: N/A
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No.: P-1111 (NEW)
 Service: Precipitation Transfer
 Capacity: 150 gpm @ 70' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: 400°F
 Rated Pressure: TBD

Equip. No.: P-1110
 Service: Centrif. Feed Pump
 Capacity: 150 gpm @ 73' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: 400°F
 Rated Pressure: TBD



Title: Cyclanilide 90946 Process Flow Diagram
 Page 2 of 4 Pages

Drawn:
DCG

Scale:
None

Date:
03/15/00

Rev:
B

Aventis: Cyclanilide--Huls Technology Basis--One (1) Centrifuge Option

Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./plow
5. Dryer discharge at 0.5% LOD
6. All Yield calculations based on DCA
7. ---
8. ---
9. ---
10. ---

R-1107

R-1109

R-1111

Summary of Results

Final Product lb/bx: 2,936 lb
 Limiting Cycle Time: 55.4 hours
 Final Product lb/day: 1,271 lb/day
 Final Product MT/day: 0.6 MT/day

Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Premix Initial Charge	R-7 Charge + Premix	MeOH Strip	O/H Charged Back	Intermed Xferred to R-9	R-9 Water Charge	R-9 Hydr. Intermediate	MeOH Distillat'n	Intermed. Xferred to R-11	Hydrol. Org. Phase to Rec'y	R-11 Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		2,292.8									
2,4 DCA	162.00	2,292.8	2,292.8									
NaOCH ₃	54.00		866.7									
MeOH	32.00		2,022.3									
H ₂ O	18.00						11,464.0	11,464.0		11,464.0		
NaOH	40.00							232.3				
Formic Acid	46.03											1,146.4
Xylene	106.17	3,439.2	11,750.6	160.5	160.5	11,750.6		11,750.6			11,750.6	
(By) Products												
Na-CPMPA	310.10					4,339.8						
MeOH	32.00			3,049.4	3,049.4	3,049.4		447.8	447.8			
Na-RPA 90946	296.10							4,040.2		4,040.2		
RPA 90946	274.10											
NaCHO ₂	68.01											
Others	---											
Stream Weight, lb/batch		5,732.0	19,225.2	3,209.9	3,209.9	19,139.8	11,464.0	27,935.1	447.8	15,504.3	11,750.6	1,146.4
Stream Volume, gal (ft ³)		783.8	2,442.3	484.6	385.3	2,703.2	1,376.2	3,457.3	67.9	1,918.8	1,623.3	116.6
Temperature, °F		100.0	136.0	146.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia (torr)		14.7	14.7	(270)	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft ³)		0.87	0.95	0.80	1.00	0.85	1.00	0.97	0.79	0.97	0.87	1.18
Viscosity, cP (CSt)												
Molar Yield (Overall)						96.5%		97.5%				
Reactor Nom. Volume (gal):			3,000.0			3,000.0		4,000.0		3,000.0		
Reactor Filled Percentage:			81%			90%		86%		64%		

Aventis: Cyclanilide-Huls Techn
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./pl
5. Dryer discharge at 0.5% LOD

		R-1110	CF:F1254	D-7100	Packout	Solvent Recovery		Water Recovery		Waste Streams	
Stream No.		12	13	14	15	16	17	18	19	20	21
Description		Precipit'd Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Xylene to Recycle	Recycled Toluene	Water to Recycle	Recycled Water	Organic Waste	Aqueous Waste
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH ₃	54.00										
MeOH	32.00										
H ₂ O	18.00	11,464.0	11,935.3	1,099.6	18.2	1.8		13,034.9	12,736.0	1.8	298.9
NaOH	40.00										
Formic Acid	46.03										
Xylene	106.17					11,750.6	8,345.7			3,405.0	
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00									6,546.7	
Na-RPA 90946	296.10										
RPA 90946	274.10	3,665.2		3,646.9	2,917.5						
NaCHO ₂	68.01	1,693.8	1,693.8					1,693.8			1,693.8
Others	---					364.7				364.7	
Stream Weight, lb/batch		16,823.0	13,629.1	4,746.5	2,935.8	12,117.1	8,345.7	14,728.6	12,736.0	10,318.1	1,992.7
Stream Volume, gal (ft ³)		2,082.0	1,558.2			1,678.4	1,156.0	1,637.2	1,528.9	1,515.6	208.0
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0	68.0	68.0
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft ³)		0.97	1.05			0.87	0.87	1.08	1.00	0.82	1.15
Viscosity, cP (CSt)											
Molar Yield (Overall)		98.0%			{92.2%}						

Reactor Nom. Volume (gal): 4,000.0
 Reactor Filled Percentage: 52%

Aventis: Cyclanilide--Huls Technology Basis--One (1) Centrifuge Option

Cycle Time Analysis

Cycle Time Analysis		Step Cycle Time	Vessel Cycle Time	Rate Limiting Time 55.4 hours	
Premix Prep (R-1107)	Charge Toluene	0.5	Σ = 2.8	Total Batch Time Req'd	91.8 hours
	Charge 2,4 DCA	1.3 [Drum]			
	Mix/Hold	1.0			
Coupling Reaction (R-1107)	Charge Premix	0.4	Σ = 9.0	Notes: nn.n indicates calculated value, otherwise value is estimated	
	Draw Vacuum	0.3			
	Heat to 56-59°C	0.8			
	Charge Na Methoxide	3.0			
	Distill MeOH/Toluene Azeotrope	2.0			
	Cool to 60-65°C	1.0			
	Charge Water	0.0			
	Transfer to Hydrolysis Rxtr	1.5			
Hydrolysis Reaction (R-1109)	Charge Water	1.5	Σ = 10.0		
	Heat/Reflux	3.0			
	Distill MeOH	2.5			
	Cool Rxtr <50°C	1.0			
	Sample/NaOH Adjust	0.0			
	Phase Separate / Transfer	2.0			
Precipitation (R-1111)	Cool <25°C	1.0	Σ = 6.0		
	Charge Formic Acid	3.0			
	Mix	0.5			
	Sample/Results	0.5			
	Transfer	0.5			
Centrifugation (R-1110, F-1254)	Centrifuge Batch	55.4	Σ = 55.4 (100 kg plow per 8 hrs)		
Drying	Charge 1.5 batches	1.0	Σ = 8.5		
	Dry Batch	6.0			
	Packout	1.5			

COST ESTIMATE SUMMARY

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MAR 26 2000

PAGE

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PROJECT:

CYCLANILIDE

DATE:

16-Mar-00

PROJECT ENGINEER:

M. REINSAGER

REV.

LABOR RATE:

\$35.00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
1.0 SITE WORK							
DEMOLITION	2	LOT	80.00	160	\$5,600.00	\$1,500.00	\$7,100.00
PAVING		SF					\$0.00
CONCRETE		YD	15.00	0	\$0.00	\$0.00	\$0.00
DRAINAGE		LOT	80.00	0	\$0.00	\$0.00	\$0.00
EARTHWORK		YD	15.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				160	\$5,600.00	\$1,500.00	\$7,100.00
2.0 CIVIL							
FOUNDATIONS	10	LOT	40.00	400	\$14,000.00	\$5,000.00	\$19,000.00
STRUCTURAL (GALVANIZED)	25000	WT	0.04	1000	\$35,000.00	\$18,750.00	\$53,750.00
PIPE RACKS	6000	WT	0.08	375	\$13,125.00	\$3,750.00	\$16,875.00
STRUCTURAL PAINTING		FT^2	0.03	0	\$0.00	\$0.00	\$0.00
GRATING	2000	FT^2	0.20	400	\$14,000.00	\$20,000.00	\$34,000.00
SUBTOTAL				2175	\$76,125.00	\$47,600.00	\$123,625.00
3.0 REACTORS (COILED/JACKETED)							
300 GALLON GLASS		EA					\$0.00
500 GALLON GLASS		EA					\$0.00
1000 GALLON GLASS		EA					\$0.00
2000 GALLON GLASS		EA	35.00	0	\$0.00	\$0.00	\$0.00
3000 GALLON GLASS		EA	40.00	0	\$0.00	\$0.00	\$0.00
4000 GALLON GLASS		EA	40.00	0	\$0.00	\$0.00	\$0.00
COLUMN (10FT)	1	EA	120.00	120	\$4,200.00	\$7,000.00	\$11,200.00
COLUMNS (10 FT PACKED)	2	EA	80.00	160	\$5,600.00	\$40,000.00	\$45,600.00
RELOCATED VESSELS		EA	40.00	0	\$0.00	\$0.00	\$0.00
REACTOR SUPPORTS/STEEL	1	EA	110.00	110	\$3,850.00	\$1,500.00	\$5,350.00
REACTOR REPAIR/MODIFICATION		EA	110.00	0	\$0.00	\$0.00	\$0.00
VESSEL INSULATION		SF	0.70	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				390	\$13,650.00	\$48,500.00	\$62,150.00
4.0 VESSELS/TANKS							
VESSEL REPAIRS		EA	25.00	0	\$0.00	\$0.00	\$0.00
HOPPER SS		EA	40.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (2000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (6000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (8000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (15000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (12000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (6000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
API, SS (12000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
API, SS (16000 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
API, SS (1500 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
MOLE SEIVE	1	EA	60.00	60	\$2,100.00	\$8,000.00	\$10,100.00
VESSEL, SS (400 GAL)	4	EA	80.00	320	\$11,200.00	\$28,000.00	\$39,200.00
VESSEL, SS (1500 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
VESSEL, SS (5000 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
VESSEL INSULATION		SF	0.70	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				380	\$13,300.00	\$38,000.00	\$49,300.00

AB0000088041

COST ESTIMATE SUMMARY

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PROJECT: CYCLANILIDE

DATE: 16-Mar-00

PROJECT ENGINEER: M. REINSAGER

REV.

LABOR RATE: \$35.00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
5.0 HEAT EXCHANGERS							
CARBATE (50 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE, TFE IMP (100 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE (200 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
CARBATE, TFE IMP. (500 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE (1000 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, HAST, (1000 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, SS (60 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, SS (350 FT^2)	3	EA	60.00	180	\$6,300.00	\$24,000.00	\$30,300.00
TUBE/SHELL, SS (600 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
COOLING TOWERS		EA	360.00	0	\$0.00	\$0.00	\$0.00
CL2 VAPORIZER		EA	60.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				180	\$6,300.00	\$24,000.00	\$30,300.00
6.0 ROTATING EQUIPMENT							
PUMPS (60 GPM)	2	EA	160.00	320	\$11,200.00	\$18,000.00	\$29,200.00
PUMPS (350 GPM)	1	EA	40.00	40	\$1,400.00	\$12,000.00	\$13,400.00
PUMPS (100 GPM), TFE LINED		EA	40.00	0	\$0.00	\$0.00	\$0.00
BLOWER		EA					\$0.00
SCREW CONVEYOR	1	EA	80.00	80	\$2,800.00	\$5,000.00	\$7,800.00
VAC PUMP, AUTO SS		EA	80.00	0	\$0.00	\$0.00	\$0.00
NUTSCHE		EA	120.00	0	\$0.00	\$0.00	\$0.00
AGITATOR - HAST-C		EA	80.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				440	\$15,400.00	\$35,000.00	\$50,400.00
7.0 FILTERING EQUIPMENT							
CARTRIDGE FILTER		EA	20.00	0	\$0.00	\$0.00	\$0.00
CARTRIDGE		EA					\$0.00
FUNDA (105 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
CENTRIFUGE - BASKET (HAST-C)		EA	120.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				0	\$0.00	\$0.00	\$0.00
8.0 PIPING							
PIPING (1-2 IN), TFE/CS		LF	1.40	0	\$0.00	\$0.00	\$0.00
PIPING (3-6 IN), TFE/CS		LF	1.70	0	\$0.00	\$0.00	\$0.00
PIPING (8-12 IN), SS		LF	2.70	0	\$0.00	\$0.00	\$0.00
PIPING (.5-.75 IN), SS		LF	0.70	0	\$0.00	\$0.00	\$0.00
PIPING (1-2 IN), SS	900	LF	1.20	1080	\$37,800.00	\$11,700.00	\$49,500.00
PIPING (3-6 IN), SS	120	LF	2.50	300	\$10,500.00	\$2,640.00	\$13,140.00
PIPING (4-6 IN), CS		LF	1.50	0	\$0.00	\$0.00	\$0.00
PIPING (.5-.75 IN), CS	200	LF	0.70	140	\$4,900.00	\$1,200.00	\$6,100.00
PIPING (1-2 IN), CS	100	LF	1.00	100	\$3,500.00	\$700.00	\$4,200.00
		LF	2.00	0	\$0.00	\$0.00	\$0.00
PIPING (2-4 IN), FIBERCAST		LF	2.00	0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (3/4-1 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (1-2 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - CS (.75 IN)	20	EA		0	\$0.00	\$2,000.00	\$2,000.00
VALVES - CS (1-2 IN)	10	EA		0	\$0.00	\$1,500.00	\$1,500.00
VALVES - CS (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - SS (3-6 IN)	2	EA		0	\$0.00	\$1,200.00	\$1,200.00
VALVES - EXOTIC		EA		0	\$0.00	\$0.00	\$0.00

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COST ESTIMATE SUMMARY

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PROJECT: CYCLANILIDE

DATE 16-Mar-00

PROJECT ENGINEER M REINSAGER

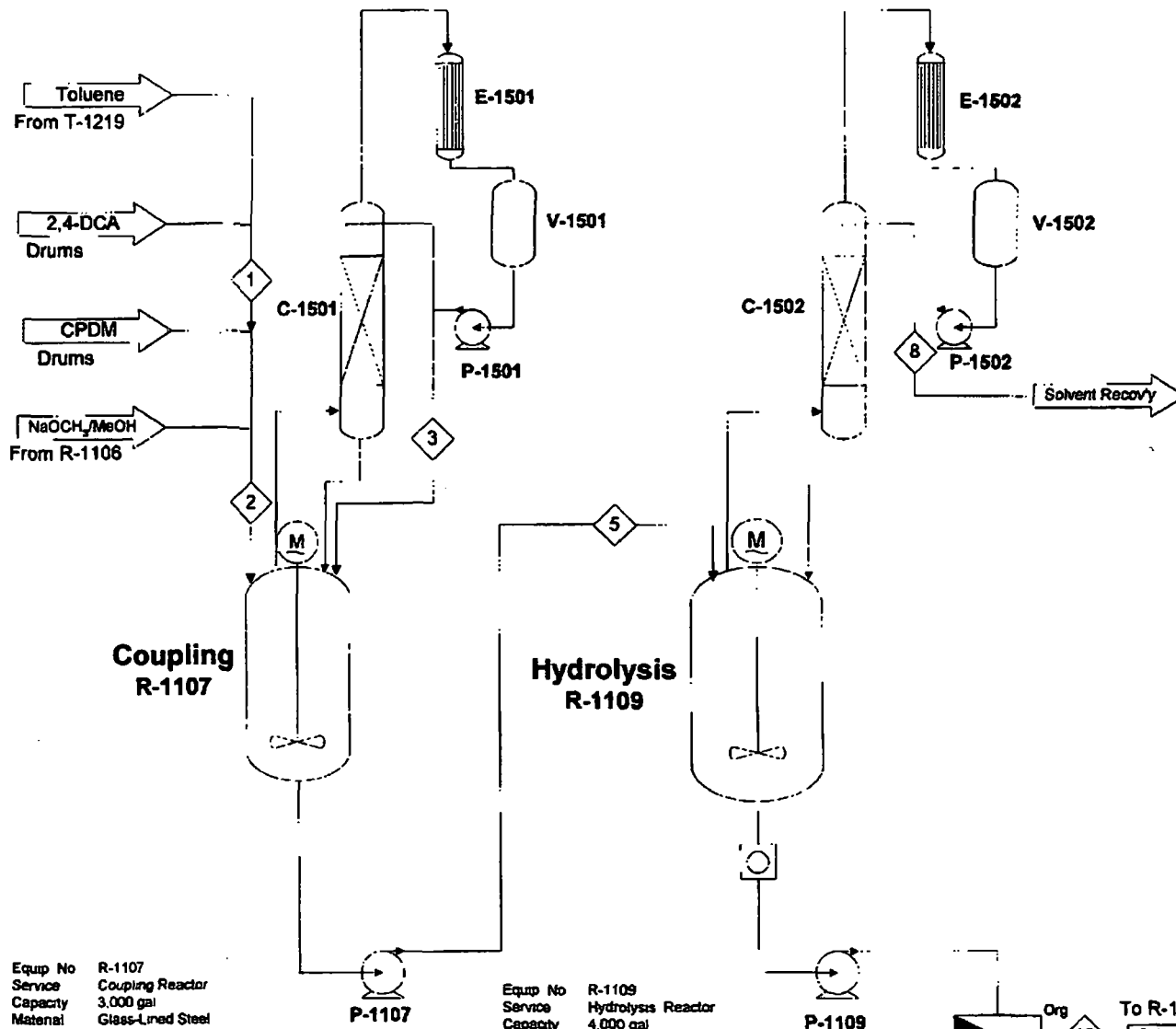
REV

LABOR RATE \$32.00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
VALVES - SS (1-2 IN)	25	EA		0	\$0.00	\$6,250.00	\$6,250.00
VALVES - SS (4-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
FITTINGS, TFE (1-2 IN)		EA		0	\$0.00	\$0.00	\$0.00
FITTINGS, TFE (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
INSULATION (2-4 IN)	100	LF	0.40	40	\$1,400.00	\$1,000.00	\$2,400.00
PAINTING		LF	0.20	0	\$0.00	\$0.00	\$0.00
PSV		EA	5.00	0	\$0.00	\$0.00	\$0.00
RUPTURE DISC		EA	5.00	0	\$0.00	\$0.00	\$0.00
STEAM TRACING/INS	150	LF	0.50	75	\$2,625.00	\$1,200.00	\$3,825.00
PIPING MISC (HANGERS, ETC.)	5	LOT	40.00	200	\$7,000.00	\$4,000.00	\$11,000.00
HOT WATER MIXER		LOT	20.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				1935	\$67,725.00	\$33,390.00	\$101,115.00
9.0 ELECTRIC/INSTRUMENTATION							
SCALE	1	EA	20.00	20	\$700.00	\$2,500.00	\$3,200.00
MOTOR (20-40 HP)	3	EA	24.00	72	\$2,520.00	\$4,500.00	\$7,020.00
WIRING/CONDUIT/TRAY	500	LF	0.70	350	\$12,250.00	\$6,000.00	\$18,250.00
FLOW INST (MICRO-MOTION)	4	EA	48.00	192	\$6,720.00	\$20,000.00	\$26,720.00
FLOW INSTRUMENTS		EA	10.00	0	\$0.00	\$0.00	\$0.00
PRESSURE INSTRUMENTS/CTRL		EA	50.00	0	\$0.00	\$0.00	\$0.00
LEVEL INSTRUMENTS	4	EA	42.00	168	\$5,880.00	\$6,000.00	\$11,880.00
GUAGE	10	EA	0.80	8	\$280.00	\$750.00	\$1,030.00
TEMP INDICATOR	5	EA	2.00	10	\$350.00	\$1,000.00	\$1,350.00
CONTROL VALVES	4	EA	24.00	96	\$3,360.00	\$8,000.00	\$11,360.00
PRESSURE REGULATORS	2	EA	8.00	16	\$560.00	\$1,000.00	\$1,560.00
CONTROLLERS	4	EA	12.00	48	\$1,680.00	\$3,200.00	\$4,880.00
INTERLOCKS (MINIMAL)	6	EA	10.00	60	\$2,100.00	\$1,800.00	\$3,900.00
DCS EQUIPMENT/CONFIGURATION		EA	120.00	0	\$0.00	\$0.00	\$0.00
CONTROL ROOM/MCC		EA	650.00	0	\$0.00	\$0.00	\$0.00
ELECTRICAL MISC	2	LOT	120.00	240	\$8,400.00	\$4,000.00	\$12,400.00
SWITCHES	6	EA	10.00	60	\$2,100.00	\$1,200.00	\$3,300.00
SUBTOTAL				1340	\$46,900.00	\$59,950.00	\$106,850.00
10.0 INSPECTION/ENGINEERING							
VESSEL INSPECTIONS		EA			\$0.00		\$0.00
ENGINEERING/DCS CONFIG	15	LOT	40.00	600	\$21,000.00		\$21,000.00
DRAFTING/DESIGN	12	LOT	40.00	480	\$16,800.00		\$16,800.00
SUBTOTAL				1080	\$37,800.00	\$0.00	\$37,800.00
11.0 RENTALS							
CRANE	3	LOT				\$4,500.00	\$4,500.00
EQUIPMENT		LOT				\$0.00	\$0.00
FREIGHT (ALL ABOVE)	6	LOT				\$9,000.00	\$9,000.00
12.0 MISCELLANEOUS							
LAB EQUIPMENT		LOT				\$0.00	\$0.00
SUBTOTAL						\$9,000.00	\$9,000.00
SUBTOTAL				8080	\$282,800.00	\$294,840.00	\$577,640.00
OVERTIME (50%)							
CONTINGENCY (40%)					\$113,120.00	\$117,936.00	\$231,056.00
TOTAL:					\$395,920.00	\$412,776.00	\$809,000.00

AB0000088041

Maximum Productivity Option



Equip No R-1107
Service Coupling Reactor
Capacity 3,000 gal
Material Glass-Lined Steel
HP N/A
RPM N/A
Rated Temperature <>°F
Rated Pressure <>psig

Equip No P-1107 (NEW)
Service Coupling Transfer
Capacity 150 gpm @ 70' TDH
Material 316 SS
HP TBD
RPM TBD
Rated Temperature 400°F
Rated Pressure TBD

Equip No R-1109
Service Hydrolysis Reactor
Capacity 4,000 gal
Material Hastelloy C
HP N/A
RPM N/A
Rated Temperature <>°F
Rated Pressure <>psig

Equip No P-1109
Service Hydrolysis Transfer
Capacity 300 gpm @ 94' TDH
Material Hastelloy C
HP <>
RPM <>
Rated Temperature <>°F
Rated Pressure <>psig

Equip No C-1501 (NEW)
Service Coupling Column
Capacity 24" dia x 10' T/T
Material 316L SS
HP N/A
RPM N/A
Rated Temperature 400°F
Rated Pressure 30 psig & FV

Equip No E-1501 (NEW)
Service Coupling Condenser
Capacity 300 sq ft
Material 316LSS tube/CS shell
HP N/A
RPM N/A
Rated Temperature 400°F
Rated Pressure 30 psig & FV

Equip No V-1501 (NEW)
Service Coupling Receiver
Capacity 350 gal
Material 316L SS
HP N/A
RPM N/A
Rated Temperature 400°F
Rated Pressure 30 psig & FV

Equip No P-1501 (NEW)
Service Coupling Recvr Pump
Capacity 30 gpm @ 40' TDH
Material 316 SS
HP TBD
RPM TBD
Rated Temperature <>°F
Rated Pressure <>psig

Equip No C-1502 (NEW)
Service Coupling Column
Capacity 24" dia x 10' T/T
Material 316L SS
HP N/A
RPM N/A
Rated Temperature 400°F
Rated Pressure 30 psig & FV

Equip No E-1502 (NEW)
Service Coupling Condenser
Capacity 300 sq ft
Material 316LSS tube/CS shell
HP N/A
RPM N/A
Rated Temperature 400°F
Rated Pressure 30 psig & FV

Equip No V-1502 (NEW)
Service Coupling Receiver
Capacity 350 gal
Material 316L SS
HP N/A
RPM N/A
Rated Temperature 400°F
Rated Pressure 30 psig & FV

Equip No P-1502 (NEW)
Service Coupling Recvr Pump
Capacity 30 gpm @ 40' TDH
Material 316 SS
HP TBD
RPM TBD
Rated Temperature <>°F
Rated Pressure <>psig



Title: Cyclanilide 90946 Process Flow Diagram
Page 1 of 4 Pages

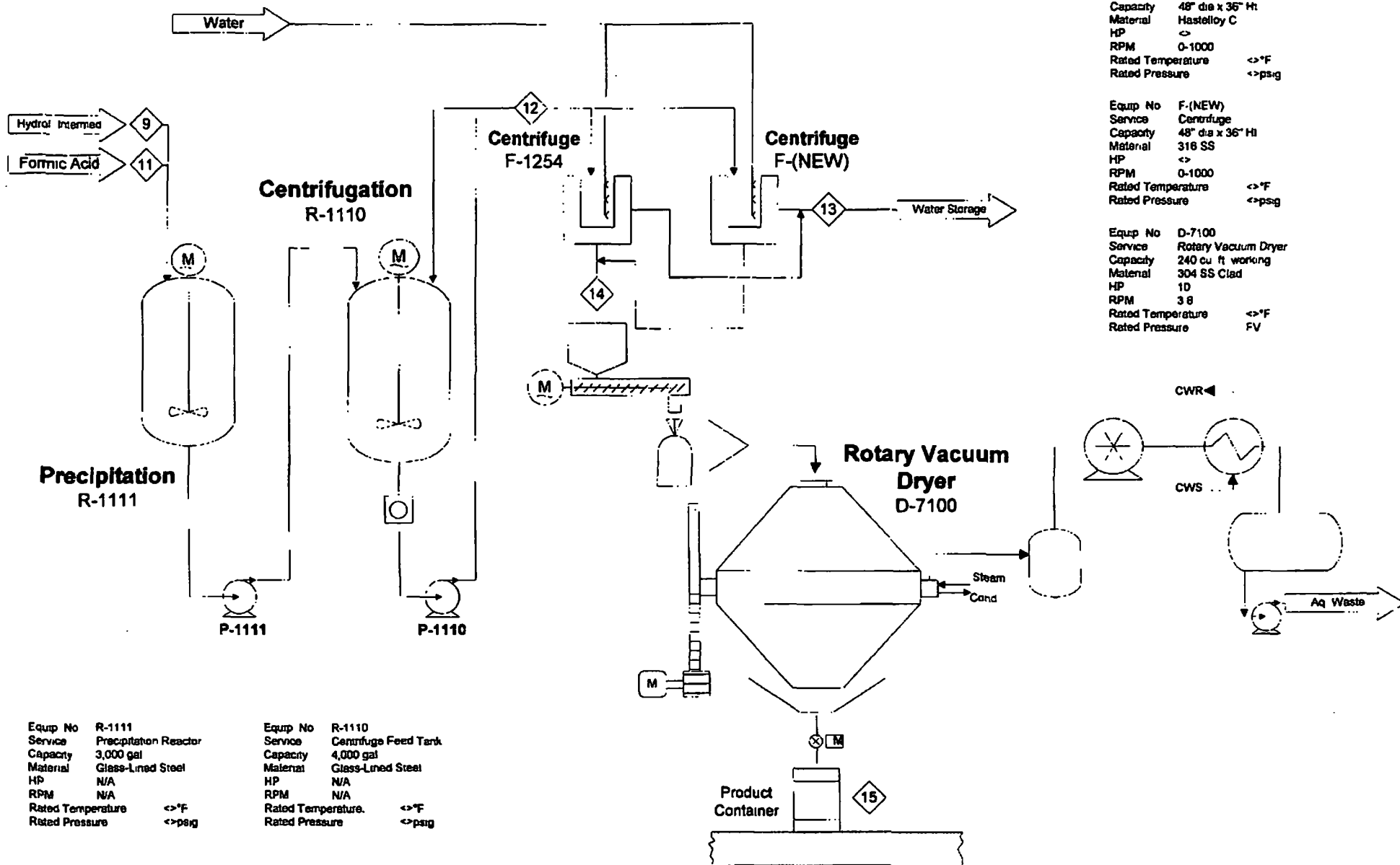
Drawn:
DCG

Scale:
None

Date:
03/15/00

Rev:
B

AB0000088041



Equip No F-1254
 Service Centrifuge
 Capacity 48" dia x 36" Ht
 Material Hastelloy C
 HP <>
 RPM 0-1000
 Rated Temperature <>*F
 Rated Pressure <>psig

Equip No F-(NEW)
 Service Centrifuge
 Capacity 48" dia x 36" Ht
 Material 316 SS
 HP <>
 RPM 0-1000
 Rated Temperature <>*F
 Rated Pressure <>psig

Equip No D-7100
 Service Rotary Vacuum Dryer
 Capacity 240 cu ft working
 Material 304 SS Clad
 HP 10
 RPM 38
 Rated Temperature <>*F
 Rated Pressure FV

Equip No R-1111
 Service Precipitation Reactor
 Capacity 3,000 gal
 Material Glass-Lined Steel
 HP N/A
 RPM N/A
 Rated Temperature <>*F
 Rated Pressure <>psig

Equip No R-1110
 Service Centrifuge Feed Tank
 Capacity 4,000 gal
 Material Glass-Lined Steel
 HP N/A
 RPM N/A
 Rated Temperature <>*F
 Rated Pressure <>psig

Equip No P-1111 (NEW)
 Service Precipitation Transfer
 Capacity 150 gpm @ 70' TDH
 Material 316 SS
 HP TBD
 RPM TBD
 Rated Temperature 400°F
 Rated Pressure TBD

Equip No P-1110
 Service Centrifuge Feed Pump
 Capacity 150 gpm @ 73' TDH
 Material 316 SS
 HP TBD
 RPM TBD
 Rated Temperature 400°F
 Rated Pressure TBD



Title: Cyclanilide 90946 Process Flow Diagram
 Page 2 of 4 Pages

Drawn:
 DCG

Scale:
 None

Date:
 03/15/00

Rev:
 B

AB0000088041

Aventis: Cyclanilide--Huls Technology Basis--Two (2) Centrifuge Option
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./plow
5. Dryer discharge at 0.5% LOD

6. All Yield calculations based on DCA

7. ---

8. ---

9. ---

10. ---

R-1107

R-1109

R-1111

Summary of Results

Final Product lb/bx: 2,936 lb
 Limiting Cycle Time: 27.7 hours
 Final Product lb/day: 2,543 lb/day
 Final Product MT/day: 1.2 MT/day

Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Premix Initial Charge	R-7 Charge + Premix	MeOH Strip	O/H Charged Back	Intermed Xferred to R-9	R-9 Water Charge	R-9 Hydr. Intermediate	MeOH Distillat'n	Intermed. Xferred to R-11	Hydrol. Org. Phase to Rec'y	R-11 Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		2,292.8									
2,4 DCA	162.00	2,292.8	2,292.8									
NaOCH ₃	54.00		866.7									
MeOH	32.00		2,022.3									
H ₂ O	18.00						11,464.0	11,464.0		11,464.0		
NaOH	40.00							232.3				
Formic Acid	46.03											1,146.4
Xylene	106.17	3,439.2	11,750.6	160.5	160.5	11,750.6		11,750.6			11,750.6	
(By) Products												
Na-CPMPA	310.10					4,339.8						
MeOH	32.00			3,049.4	3,049.4	3,049.4		447.8	447.8			
Na-RPA 90946	296.10							4,040.2		4,040.2		
RPA 90946	274.10											
NaCHO ₂	68.01											
Others	---											
Stream Weight, lb/batch		5,732.0	19,225.2	3,209.9	3,209.9	19,139.8	11,464.0	27,935.1	447.8	15,504.3	11,750.6	1,146.4
Stream Volume, gal (ft ³)		783.8	2,442.3	484.6	385.3	2,703.2	1,376.2	3,457.3	67.9	1,918.8	1,623.3	116.6
Temperature, °F		100.0	136.0	146.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia (torr)		14.7	14.7	(270)	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft ³)		0.87	0.95	0.80	1.00	0.85	1.00	0.97	0.79	0.97	0.87	1.18
Viscosity, cP (cSt)												
Molar Yield (Overall)						96.5%		97.5%				

Reactor Nom. Volume (gal):

3,000.0

3,000.0

4,000.0

3,000.0

Reactor Filled Percentage:

81%

90%

86%

64%

Aventis: Cyclanilide--Huls Techn
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./pl
5. Dryer discharge at 0.5% LOD

		R-1110	CF:F1254	D-7100	Packout	Solvent Recovery		Water Recovery		Waste Streams	
Stream No.		12	13	14	15	16	17	18	19	20	21
Description		Precipit'd Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Xylene to Recycle	Recycled Toluene	Water to Recycle	Recycled Water	Organic Waste	Aqueous Waste
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH3	54.00										
MeOH	32.00										
H2O	18.00	11,464.0	11,935.3	1,099.6	18.2	1.8		13,034.9	12,736.0	1.8	298.9
NaOH	40.00										
Formic Acid	46.03										
Xylene	106.17					11,750.6	8,345.7			3,405.0	
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00									6,546.7	
Na-RPA 90946	296.10										
RPA 90946	274.10	3,665.2		3,646.9	2,917.5						
NaCHO2	68.01	1,693.8	1,693.8					1,693.8			1,693.8
Others	---					364.7				364.7	
Stream Weight, lb/batch		16,823.0	13,629.1	4,746.5	2,935.8	12,117.1	8,345.7	14,728.6	12,736.0	10,318.1	1,992.7
Stream Volume, gal (ft3)		2,082.0	1,558.2			1,678.4	1,156.0	1,637.2	1,528.9	1,515.6	208.0
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0	68.0	68.0
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.97	1.05			0.87	0.87	1.08	1.00	0.82	1.15
Viscosity, cP (CSt)											
Molar Yield (Overall)		98.0%			{92.2%}						

Reactor Nom. Volume (gal): 4,000.0
Reactor Filled Percentage: 52%

Aventis: Cyclanilide--Huls Technology Basis--Two (2) Centrifuge Option
Cycle Time Analysis

		Step Cycle Time	Vessel Cycle Time	Rate Limiting Time 27.7 hours
Premix Prep (R-1107)	Charge Toluene	0.5		
	Charge 2,4 DCA	1.3 [Drum]		
	Mix/Hold	1.0	$\Sigma = 2.8$	Total Batch 64.1 hours Time Req'd
Coupling Reaction (R-1107)	Charge Premix	0.4		
	Draw Vacuum	0.3		
	Heat to 56-59°C	0.8		
	Charge Na Methoxide	3.0		
	Distill MeOH/Toluene Azeotrope	2.0		
	Cool to 60-65°C	1.0		
	Charge Water	0.0		
	Transfer to Hydrolysis Rxtr	1.5	$\Sigma = 9.0$	Notes: nn.n Indicates calculated value, otherwise value is estimated
Hydrolysis Reaction (R-1109)	Charge Water	1.5		
	Heat/Reflux	3.0		
	Distill MeOH	2.5		
	Cool Rxtr <50°C	1.0		
	Sample/NaOH Adjust	0.0		
	Phase Separate / Transfer	2.0	$\Sigma = 10.0$	
Precipitation (R-1111)	Cool <25°C	1.0		
	Charge Formic Acid	3.0		
	Mix	0.5		
	Sample/Results	0.5		
	Transfer	0.5	$\Sigma = 6.0$	
Centrifugation (R-1110, F-1254)	Centrifuge Batch	27.7	$\Sigma = 27.7$ (100 kg plow per 8 hrs)	
Drying	Charge 1.5 batches	1.0		
	Dry Batch	6.0		
	Packout	1.5	$\Sigma = 8.5$	

COST ESTIMATE SUMMARY

PAGE

1 of 3

PROJECT: CYCLANILIDE V3 (CENTRIFUGE)

DATE:

16-Mar-00

PROJECT ENGINEER: M REINSAGER

--REV.

LABOR RATE: \$35.00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
1.0 SITE WORK							
DEMOLITION	4	LOT	80.00	320	\$11,200.00	\$3,000.00	\$14,200.00
PAVING		SF					\$0.00
CONCRETE	16	YD	15.00	240	\$8,400.00	\$1,760.00	\$10,160.00
DRAINAGE		LOT	80.00	0	\$0.00	\$0.00	\$0.00
EARTHWORK		YD	15.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				560	\$19,600.00	\$4,760.00	\$24,360.00
2.0 CIVIL							
FOUNDATIONS	10	LOT	40.00	400	\$14,000.00	\$5,000.00	\$19,000.00
STRUCTURAL (GALVANIZED)	38000	WT	0.04	1520	\$53,200.00	\$30,400.00	\$83,600.00
PIPE RACKS	6500	WT	0.08	488	\$17,062.50	\$4,875.00	\$21,937.50
STRUCTURAL PAINTING		FT^2	0.03	0	\$0.00	\$0.00	\$0.00
GRATING	1000	FT^2	0.20	200	\$7,000.00	\$10,000.00	\$17,000.00
SUBTOTAL				2608	\$91,262.50	\$50,275.00	\$141,537.50
3.0 REACTORS (COILED/JACKETED)							
300 GALLON GLASS		EA					\$0.00
500 GALLON GLASS		EA					\$0.00
1000 GALLON GLASS		EA					\$0.00
2000 GALLON GLASS		EA	35.00	0	\$0.00	\$0.00	\$0.00
3000 GALLON GLASS		EA	40.00	0	\$0.00	\$0.00	\$0.00
4000 GALLON GLASS		EA	40.00	0	\$0.00	\$0.00	\$0.00
COLUMN (10FT)	1	EA	120.00	120	\$4,200.00	\$7,000.00	\$11,200.00
COLUMNS (10 FT PACKED)	2	EA	80.00	160	\$5,600.00	\$40,000.00	\$45,600.00
RELOCATED VESSELS		EA	40.00	0	\$0.00	\$0.00	\$0.00
REACTOR SUPPORTS/STEEL	1	EA	110.00	110	\$3,850.00	\$1,500.00	\$5,350.00
REACTOR REPAIR/MODIFICATION		EA	110.00	0	\$0.00	\$0.00	\$0.00
VESSEL INSULATION		SF	0.70	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				390	\$13,650.00	\$48,500.00	\$62,150.00
4.0 VESSELS/TANKS							
VESSEL REPAIRS		EA	25.00	0	\$0.00	\$0.00	\$0.00
HOPPER SS		EA	40.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (2000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (6000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (8000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (15000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (12000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (6000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
API, SS (12000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
API, SS (16000 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
API, SS (1500 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
MOLE SEIVE	1	EA	60.00	60	\$2,100.00	\$8,000.00	\$10,100.00
VESSEL, SS (400 GAL)	4	EA	80.00	320	\$11,200.00	\$28,000.00	\$39,200.00
VESSEL, SS (1500 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
VESSEL, SS (5000 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
VESSEL INSULATION		SF	0.70	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				380	\$13,300.00	\$36,000.00	\$49,300.00

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COST ESTIMATE SUMMARY

PAGE 2 of 3

PROJECT: CYCLANILIDE V3 (CENTRIFUGE)

DATE: 16-Mar-00

PROJECT ENGINEER: M. REINSAGER

REV.

LABOR RATE: \$35.00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
5.0 HEAT EXCHANGERS							
CARBATE (50 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE, TFE IMP. (100 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE (200 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE, TFE IMP. (500 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE (1000 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, HAST. (1000 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, SS (50 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, SS (350 FT^2)	3	EA	60.00	180	\$6,300.00	\$24,000.00	\$30,300.00
TUBE/SHELL, SS (600 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
COOLING TOWERS		EA	350.00	0	\$0.00	\$0.00	\$0.00
CL2 VAPORIZER		EA	60.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				180	\$6,300.00	\$24,000.00	\$30,300.00
6.0 ROTATING EQUIPMENT							
PUMPS (50 GPM)	2	EA	160.00	320	\$11,200.00	\$18,000.00	\$29,200.00
PUMPS (350 GPM)	1	EA	40.00	40	\$1,400.00	\$12,000.00	\$13,400.00
PUMPS (100 GPM), TFE LINED		EA	40.00	0	\$0.00	\$0.00	\$0.00
BLOWER		EA					\$0.00
SCREW CONVEYOR	1	EA	80.00	80	\$2,800.00	\$5,000.00	\$7,800.00
VAC PUMP, AUTO SS		EA	80.00	0	\$0.00	\$0.00	\$0.00
NUTSCHE		EA	120.00	0	\$0.00	\$0.00	\$0.00
CENTRIFUGE (48" SS)		EA	80.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				440	\$15,400.00	\$35,000.00	\$50,400.00
7.0 FILTERING EQUIPMENT							
CARTRIDGE FILTER		EA	20.00	0	\$0.00	\$0.00	\$0.00
CARTRIDGE		EA					\$0.00
FUNDA (105 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
CENTRIFUGE - BASKET (SS)	1	EA	240.00	240	\$8,400.00	\$70,000.00	\$78,400.00
SUBTOTAL				240	\$8,400.00	\$70,000.00	\$78,400.00
8.0 PIPING							
PIPING (1-2 IN), TFE/CS		LF	1.40	0	\$0.00	\$0.00	\$0.00
PIPING (3-6 IN), TFE/CS		LF	1.70	0	\$0.00	\$0.00	\$0.00
PIPING (8-12 IN), SS		LF	2.70	0	\$0.00	\$0.00	\$0.00
PIPING (5-7.5 IN), SS		LF	0.70	0	\$0.00	\$0.00	\$0.00
PIPING (1-2 IN), SS	1300	LF	1.20	1560	\$54,600.00	\$16,900.00	\$71,500.00
PIPING (3-6 IN), SS	300	LF	2.50	750	\$26,250.00	\$8,600.00	\$32,850.00
PIPING (4-6 IN), CS		LF	1.50	0	\$0.00	\$0.00	\$0.00
PIPING (5-7.5 IN), CS	250	LF	0.70	175	\$6,125.00	\$1,500.00	\$7,625.00
PIPING (1-2 IN), CS	100	LF	1.00	100	\$3,500.00	\$700.00	\$4,200.00
		LF	2.00	0	\$0.00	\$0.00	\$0.00
PIPING (2-4 IN), FIBERCAST		LF	2.00	0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (3/4-1 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (1-2 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - CS (7.5 IN)	20	EA		0	\$0.00	\$2,000.00	\$2,000.00
VALVES - CS (1-2 IN)	10	EA		0	\$0.00	\$1,500.00	\$1,500.00
VALVES - CS (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - SS (3-6 IN)	4	EA		0	\$0.00	\$2,400.00	\$2,400.00
VALVES - EXOTIC		EA		0	\$0.00	\$0.00	\$0.00

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COST ESTIMATE SUMMARY

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PROJECT: CYCLANILIDE V3 (CENTRIFUGE)

DATE 16-Mar-00

PROJECT ENGINEER

M REINSAGER

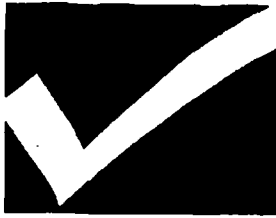
REV

LABOR RATE

\$35 00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
VALVES - SS (1-2 IN)	35	EA		0	\$0 00	\$8,750 00	\$8,750 00
VALVES - SS (4-6 IN)		EA		0	\$0 00	\$0 00	\$0 00
FITTINGS TFE (1-2 IN)		EA		0	\$0 00	\$0 00	\$0 00
FITTINGS TFE (3-6 IN)		EA		0	\$0 00	\$0 00	\$0 00
INSULATION (2-4 IN)	100	LF	0 40	40	\$1,400 00	\$1,000 00	\$2,400 00
PAINTING		LF	0 20	0	\$0 00	\$0 00	\$0 00
PSV		EA	5 00	0	\$0 00	\$0 00	\$0 00
RUPTURE DISC		EA	5 00	0	\$0 00	\$0 00	\$0 00
STEAM TRACING/INS	150	LF	0 50	75	\$2,625 00	\$1,200 00	\$3,825 00
PIPING MISC (HANGERS, ETC)	8	LOT	40 00	320	\$11,200 00	\$6,400 00	\$17,600 00
HOT WATER MIXER		LOT	20 00	0	\$0 00	\$0 00	\$0 00
SUBTOTAL				3020	\$105,700.00	\$48,950.00	\$154,650.00
9.0 ELECTRIC/INSTRUMENTATION							
SCALE	1	EA	20 00	20	\$700 00	\$2,500 00	\$3,200 00
MOTOR (20-40 HP)	4	EA	24 00	96	\$3,360 00	\$6,000 00	\$9,360 00
WIRING/CONDUIT/TRAY	800	LF	0 70	560	\$19,600 00	\$9,600 00	\$29,200 00
FLOW INST (MICRO-MOTION)	4	EA	48 00	192	\$6,720 00	\$20,000 00	\$26,720 00
FLOW INSTRUMENTS		EA	10 00	0	\$0 00	\$0 00	\$0 00
PRESSURE INSTRUMENTS/CTRL		EA	50 00	0	\$0 00	\$0 00	\$0 00
LEVEL INSTRUMENTS	4	EA	42 00	168	\$5,880 00	\$6,000 00	\$11,880 00
GUAGES	16	EA	0 80	13	\$448 00	\$1,200 00	\$1,648 00
TEMP INDICATOR	5	EA	2 00	10	\$350 00	\$1,000 00	\$1,350 00
CONTROL VALVES	8	EA	24 00	192	\$6,720 00	\$16,000 00	\$22,720 00
PRESSURE REGULATORS	2	EA	8 00	16	\$560 00	\$1,000 00	\$1,560 00
CONTROLLERS	4	EA	12 00	48	\$1,680 00	\$3,200 00	\$4,880 00
INTERLOCKS (MINIMAL)	8	EA	10 00	80	\$2,800 00	\$2,400 00	\$5,200 00
CENTRIFUGE CONTROL	1	EA	250 00	250	\$8,750 00	\$15,000 00	\$23,750 00
CONTROL ROOM/MCC		EA	650 00	0	\$0 00	\$0 00	\$0 00
ELECTRICAL MISC	4	LOT	160 00	640	\$22,400 00	\$12,000 00	\$34,400 00
SWITCHES	8	EA	10 00	80	\$2,800 00	\$1,600 00	\$4,400 00
SUBTOTAL				2365	\$82,768.00	\$97,500.00	\$180,268.00
10.0 INSPECTION/ENGINEERING							
VESSEL INSPECTIONS		EA			\$0 00		\$0 00
ENGINEERING/DCS CONFIG	20	LOT	40 00	800	\$28,000 00		\$28,000 00
DRAFTING/DESIGN	20	LOT	40 00	800	\$28,000 00		\$28,000 00
SUBTOTAL				1600	\$56,000.00	\$0.00	\$56,000.00
11.0 RENTALS							
CRANE	3	LOT				\$4,500 00	\$4,500 00
EQUIPMENT		LOT				\$0 00	\$0 00
FREIGHT (ALL ABOVE)	6	LOT				\$9,000 00	\$9,000 00
12.0 MISCELLANEOUS							
LAB EQUIPMENT		LOT				\$0 00	\$0 00
SUBTOTAL						\$9,000.00	\$9,000.00
SUBTOTAL				11782.3	\$412,380.50	\$423,985.00	\$836,365.50
OVERTIME (50%)							
CONTINGENCY (40%)					\$164,952.20	\$169,594.00	\$334,546.20
TOTAL					\$577,332.70	\$593,579.00	\$1,171,000.00

AB0000088041



Cyclanilide 90946 Project Team Kick-Off Meeting

3/30/00

11:36 AM to 1:06 PM

Main Conference Room

Facilitator: David Guffey

Attendees: S. Herrington, R. Johns, J. Larry, C. Lloyd, S. McCarty, M. Reinsager, D. Roberts, K. Sims, K. Strayhorn, J. Vincent

----- Agenda Topics -----

Project Team Introduction	DG	15
Process Overview	DG	30
Drawings & Equipment List	DG	30
Material Balance & Time Cycle	DG	15

Other Information



Cyclanilide 90946 Project Team Kick-Off Meeting

3/30/00

11:36 AM to 1:06 PM

Main Conference Room

Facilitator:

Attendees:

----- Agenda Topics -----

Project Team Introduction

DG

15

Discussion:

Conclusions:

--

Action items:

Person responsible:

Deadline:

Process Overview

DG

30

Discussion:

Conclusions:

--

Action items:

Person responsible:

Deadline:

Drawings & Equipment List	DG	30
<u>Discussion:</u>		
<u>Conclusions:</u>		
<u>Action items:</u>	<u>Person responsible:</u>	<u>Deadline:</u>

Material Balance & Time Cycle	DG	15
<u>Discussion:</u>		
<u>Conclusions:</u>		
<u>Action items:</u>	<u>Person responsible:</u>	<u>Deadline:</u>

Other Information

Cyclanillide 90946

Process Description

I. Coupling Reaction

- A. Charge Xylene
- B. Charge 2,4-DCA - *chloracne concerns*
- C. Heat & add CPDM
- D. Draw vacuum & continue heating
- E. Meter Sodium Methoxide into batch while
- F. Distilling off MeOH generated by reaction
- G. Cool batch
- H. Charge water
- I. Transfer to Hydrolysis Reactor

II. Hydrolysis Reaction

- A. Charge remainder of water
- B. Heat
- C. Distill MeOH at atmospheric pressure
- D. Cool
- E. Phase separate AQ Layer contains product (bottom) & is transferred to Precip Reactor—ORG layer goes to solvent recovery

III. Precipitation Reaction

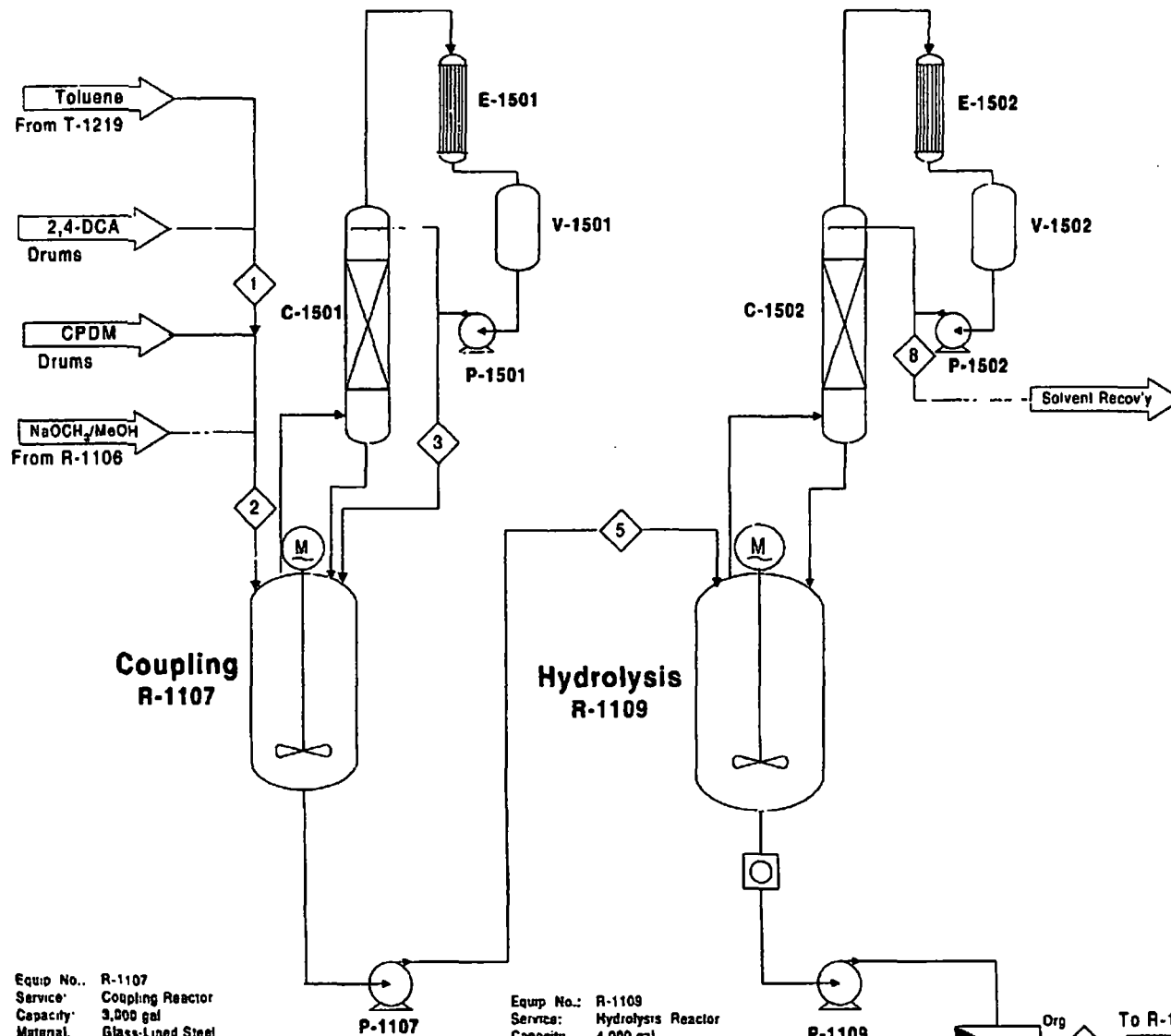
- A. Cool batch
- B. Meter Formic Acid into batch
- C. Wait until pH at specified level
- D. Transfer to Centrifuge Feed Tank

IV. Centrifugation

- A. Batch is centrifuged and loaded into supersacks (or drums) via screw conveyor.
- B. Supersacks (or drums) transferred to Unit 7 Vacuum Dryer.

V. Drying

- A. Supersacks (or drums) loaded into rotary vacuum dryer and dried for ~4-6 hours.



Equip. No. C-1501 (NEW)
 Service: Coupling Column
 Capacity: 24" dia x 10' T/T
 Material: 316L SS
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No. C-1502 (NEW)
 Service: Coupling Column
 Capacity: 24" dia x 10' T/T
 Material: 316L SS
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No. E-1501 (NEW)
 Service: Coupling Condenser
 Capacity: 300 sq ft
 Material: 316LSS tube/CS shell
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No. E-1502 (NEW)
 Service: Coupling Condenser
 Capacity: 300 sq ft
 Material: 316LSS tube/CS shell
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No. V-1501 (NEW)
 Service: Coupling Receiver
 Capacity: 350 gal
 Material: 316L SS
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No. V-1502 (NEW)
 Service: Coupling Receiver
 Capacity: 350 gal
 Material: 316L SS
 HP: N/A
 RPM: N/A
 Rated Temperature: 400°F
 Rated Pressure: 30 psig & FV

Equip. No. P-1501 (NEW)
 Service: Coupling Recv. Pump
 Capacity: 30 gpm @ 40' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No. P-1502 (NEW)
 Service: Coupling Recv. Pump
 Capacity: 30 gpm @ 40' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No. R-1107
 Service: Coupling Reactor
 Capacity: 3,000 gal
 Material: Glass-Lined Steel
 HP: N/A
 RPM: N/A
 Rated Temperature: <>°F
 Rated Pressure: <>psig

Equip. No. R-1109
 Service: Hydrolysis Reactor
 Capacity: 4,000 gal
 Material: Hastelloy C
 HP: N/A
 RPM: N/A
 Rated Temperature: <>°F
 Rated Pressure: <>psig

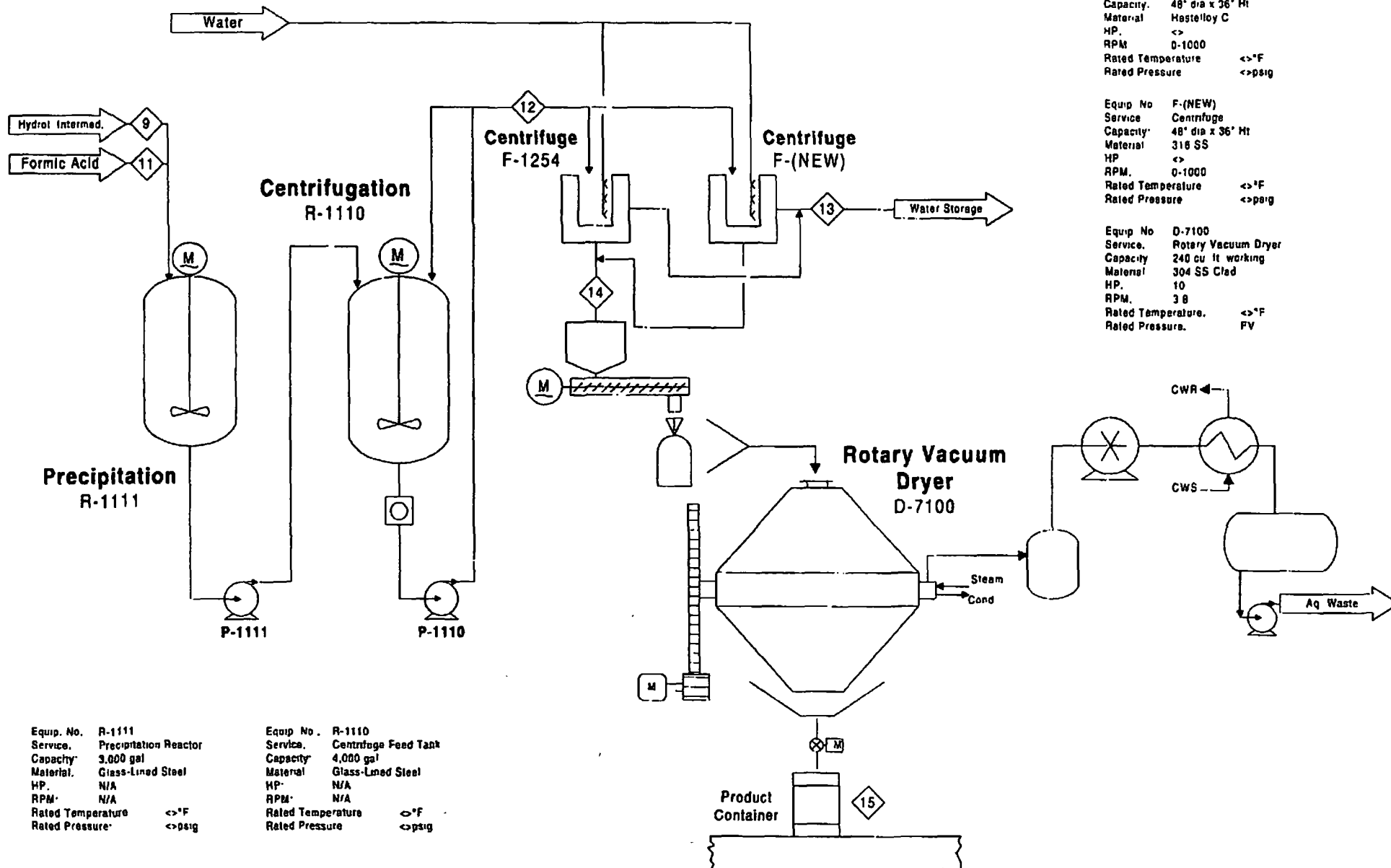
Equip. No. P-1107 (NEW)
 Service: Coupling Transfer
 Capacity: 150 gpm @ 70' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: 400°F
 Rated Pressure: TBD

Equip. No. P-1109
 Service: Hydrolysis Transfer
 Capacity: 300 gpm @ 94' TDH
 Material: Hastelloy C
 HP: <>
 RPM: <>
 Rated Temperature: <>°F
 Rated Pressure: <>psig



Title: Cyclanilide 90946 Process Flow Diagram
 Page 1 of 4 Pages

Drawn: DCG	Scale: None	Date: 03/15/00	Rev: B
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Equip No. F-1254
 Service: Centrifuge
 Capacity: 48" dia x 36" Ht
 Material: Hastelloy C
 HP: <>
 RPM: 0-1000
 Rated Temperature: <>*F
 Rated Pressure: <>psig

Equip No F-(NEW)
 Service: Centrifuge
 Capacity: 48" dia x 36" Ht
 Material: 316 SS
 HP: <>
 RPM: 0-1000
 Rated Temperature: <>*F
 Rated Pressure: <>psig

Equip No D-7100
 Service: Rotary Vacuum Dryer
 Capacity: 240 cu ft working
 Material: 304 SS Clad
 HP: 10
 RPM: 38
 Rated Temperature: <>*F
 Rated Pressure: FV

Equip. No. R-1111
 Service: Precipitation Reactor
 Capacity: 3,000 gal
 Material: Glass-Lined Steel
 HP: N/A
 RPM: N/A
 Rated Temperature: <>*F
 Rated Pressure: <>psig

Equip. No. R-1110
 Service: Centrifuge Feed Tank
 Capacity: 4,000 gal
 Material: Glass-Lined Steel
 HP: N/A
 RPM: N/A
 Rated Temperature: <>*F
 Rated Pressure: <>psig

Equip No P-1111 (NEW)
 Service: Precipitation Transfer
 Capacity: 150 gpm @ 70' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: 400°F
 Rated Pressure: TBD

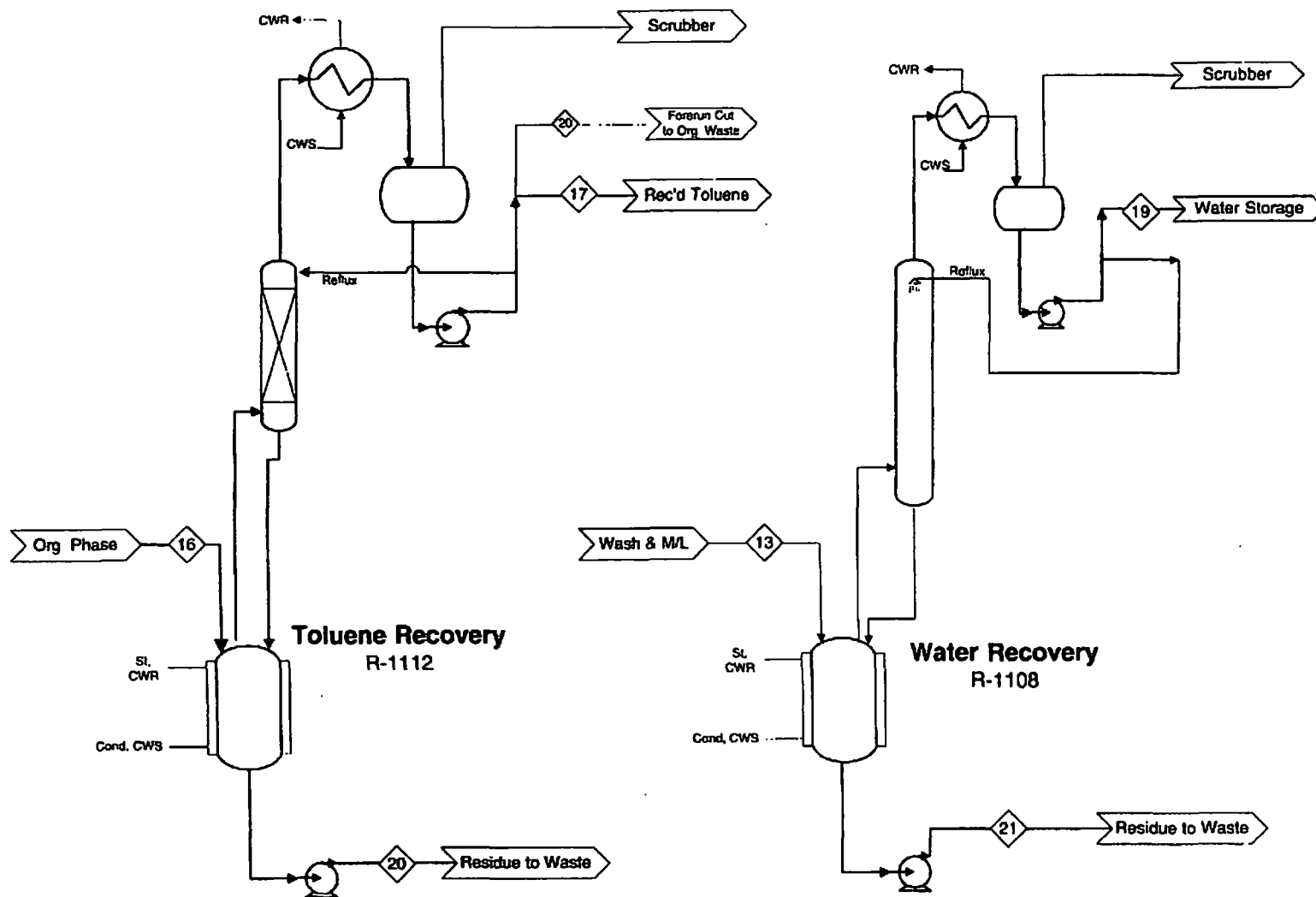
Equip. No. P-1110
 Service: Centrif. Feed Pump
 Capacity: 150 gpm @ 73' TDH
 Material: 316 SS
 HP: TBD
 RPM: TBD
 Rated Temperature: 400°F
 Rated Pressure: TBD




Title: Cyclanilide 90946 Process Flow Diagram
 Page 2 of 4 Pages

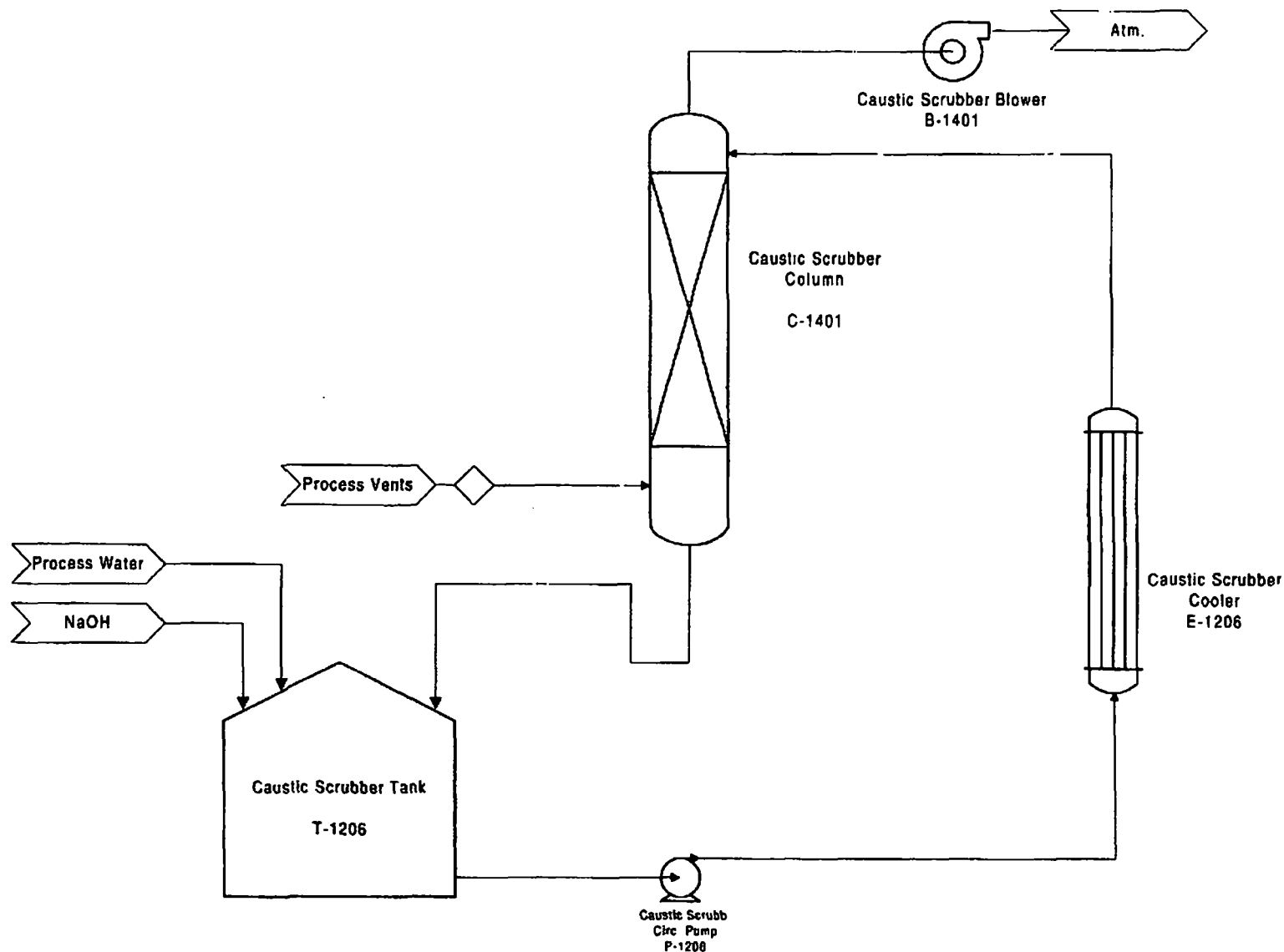
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	Title: Cyclanilide 90946 Process Flow Diagram Page 3 of 4 Pages			
	Drawn: DCG	Scale: None	Date: 02/26/00	Rev: B

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	Title: Cyclanilide 90946 Process Flow Diagram Page 4 of 4 Pages			
	Drawn: DCG	Scale: None	Date: 02/26/00	Rev: B

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Rhone-Poulenc RPA 90946 (Cyclanilide)
Project Equipment List

Revision:	04
Rev. Date:	3/21/00

<u>Service</u>	<u>Equip. No.</u>	<u>Mat'l of Const.</u>	<u>Size/Capacity</u>
<u>Raw Materials</u>			
Toluene Storage Tank	T-1222	316 SS	12900 gal.
Toluene Transfer Pump	P-1222	Alloy D4	75 gpm @ 72'
Sodium Methoxide Storage	T-1219	316 SS	16000 gal.
Sodium Meth. Meter Pump	P-1221	PTFE	400 gph
Formic Acid Storage	T-1221	GLS	1500 gal.
Formic Acid Feed Pump	P-1104B	Alloy D20	50 gpm @ 76'
2.4 DCA	Drums		
CPDM	Drums		
<u>Coupling System</u>			
Reactor	R-1107	GLS	3000 gal
Agitator	A-1107	GLS	20 hp
Column	C- (NEW)	316 SS	2' dia x 10' T/T
Column Packing	PK- (NEW)	316 SS	Wire Gauze
Column Condenser	E- (NEW)	316 SS	300 sq. ft.
Cond. Receiver	T- (NEW)	316 SS	350 gal
Receiver Pump	P- (NEW)	316 SS	30 gpm @ 40'
<u>Hydrolysis System</u>			
Reactor	R-1109	Hast-C	4000 gal
Agitator	A-1109	Hast-C	25 hp
Transfer Pump	P-1109	PFA Lined St.	300 gpm @ 94'
Column	C- (NEW)	316 SS	2' dia x 10' T/T
Column Packing	PK- (NEW)	316 SS	Wire Gauze
Column Condenser	E-1109	Hast-C	1153 sq. ft.
Cond. Receiver	T- (NEW)	316 SS	350 gal
Receiver Pump	P- (NEW)	316 SS	30 gpm @ 40'
<u>Precipitation & Centrifugation</u>			
Reactor	R-1110	GLS	4000 gal
Reactor Agitator	A-1110	GLS	10 hp
Reactor Transfer Pump	P-1110	316 SS	150 gpm @ 73'
Centrifuge Feed Tank			
Centrifuge Feed Tank Agitator			
Centrifuge Feed Pump			
Centrifuge	F-1254	Hast-C	48"x30" P/B
Centrifuge M/L Receiver	V-1304	GLS	750 gal
<u>Vacuum System</u>			
Vacuum Pump	VP-1404	316 SS	300 acfm
Vac. Pump. K/O Pot	V-1404	316 SS	75 gal
<u>Drying System</u>			
Dryer	D-7100	304 SS	7 cu. Meter
Vacuum Pump	VP-7100	CS	154 cfm
Dryer Condenser	E-7105	316 SS / CS	198 sq. ft.
Condensate Receiver	V-7101	316 SS	500 gal
Cond. Rec'vr Transfer Pump	P-7101	316 SS	20 gpm @ 45'
Dryer Discharge Mill	ML- (NEW)	316 SS	4" dia x 100 rpm

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Dryer Scrubber Column	C-5403	316 SS	10" D x 25' L
Dryer Scrubb. Blower	B-5403	FRP	200 cfm
Dryer Scrubber Tank	T-5403	FRP	1800 gal
Dryer Scrubber Circ Pump	P-5403	316 SS	30 gpm @ 60'

Process Environmental Controls

Process Scrubber Column	C-1401	CS/FRP	30" x 18' Pkd
Process Scrubber Tank	T-1206	CS	10000 gal
Proc. Scrubb. Circ. Pump	P-1206	316 SS	65 gpm @ 43'
Proc. Scrubb. Circ. Cooler	E-1206	CS / CS	100 sq. ft.

Toluene Recovery

Crude Toluene Storage	R-1114	GLS	3000 gal
Crude Tol. Transf. Pump	P-(NEW)	316 SS	300 gpm @ 60'
Still Pot	R-1112	GLS	2000 gal.
Still Pot Pump	P-(NEW)	316 SS	TBD
Column	C-1412	GLS	2' d x 32' P/H
Primary Condenser	E-1412A	316 SS	141 sq. ft.
Secondary Condenser	E-1412B	316 SS	47 sq. ft.
Receiver	V-1312	316 SS	1000 gal.
Receiver Pump	P-1312	Alloy D4	25 gpm @ 55'
Rcvd Tol Storage Tank	T-1222	316 SS	12900 gal.
Rcvd Tol Storage Pump	P-1222	Alloy D4	75 gpm @ 72'
Conc. Toluene Waste Solution	Wrangler S/S	(solid at amb. conditions)	

Water Recovery

Dilute Water Storage	T-1226	FRP	5800 gal
Still Pot	R-1108	GLS	1000 gal
Still Pot Agitator	A-1108	GLS	7.5 hp
Column	C- (NEW)	316 SS	2' x 10' Unpkd
Condenser	E- (NEW)	316 SS / CS	300 sq. ft.
Receiver	V- (NEW)	316 SS	500 gal
Recycle Water Storage	T-1224	FRP	3800 gal
Recy. Water Transf. Pump	P-1224	PFA Lined St	80 gpm @ 80'
Recy. Water Carbon Bed (RENTAL)	F-(NEW)	FRP/GAC	250 gal.
Conc. Salt Waste Solution	Wrangler S/S	(solid at amb. conditions)	

Aventis: Cyclanilide--Huls Technology Basis--Two (2) Centrifuge Option
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./plow
5. Dryer discharge at 0.5% LOD
6. All Yield calculations based on DCA
7. ---
8. ---
9. ---
10. ---

Summary of Results

Final Product lb/bx: 2,936 lb
 Limiting Cycle Time: 27.7 hours
 Final Product lb/day: 2,543 lb/day
 Final Product MT/day: 1.2 MT/day

		R-1107		R-1109				R-1111				
Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Premix Initial Charge	R-7 Charge + Premix	MeOH Strip	O/H Charged Back	Intermed Xferred to R-9	R-9 Water Charge	R-9 Hydr. Intermediate	MeOH Distillat'n	Intermed. Xferred to R-11	Hydrol. Org. Phase to Rec'y	R-11 Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		2,292.8									
2,4 DCA	162.00	2,292.8	2,292.8									
NaOCH3	54.00		866.7									
MeOH	32.00		2,022.3									
H2O	18.00						11,464.0	11,464.0		11,464.0		
NaOH	40.00							232.3				
Formic Acid	46.03											1,146.4
Xylene	106.17	3,439.2	11,750.6	160.5	160.5	11,750.6		11,750.6			11,750.6	
(By) Products												
Na-CPMPA	310.10					4,339.8						
MeOH	32.00			3,049.4	3,049.4	3,049.4		447.8	447.8			
Na-RPA 90946	296.10							4,040.2		4,040.2		
RPA 90946	274.10											
NaCHO2	68.01											
Others	---											
Stream Weight, lb/batch		5,792.0	19,225.2	3,209.9	3,209.9	19,139.8	11,464.0	27,935.1	447.8	15,504.3	11,750.6	1,146.4
Stream Volume, gal {ft3}		793.8	2,442.3	484.6	385.3	2,703.2	1,376.2	3,457.3	67.9	1,918.8	1,623.3	116.6
Temperature, °F		100.0	136.0	146.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia (torr)		14.7	14.7	{270}	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc {lb/ft3}		0.87	0.95	0.80	1.00	0.85	1.00	0.97	0.79	0.97	0.87	1.18
Viscosity, cP (CSt)												
Molar Yield {Overall}						96.5%		97.5%				
Reactor Nom. Volume (gal):			3,000.0			3,000.0		4,000.0		3,000.0		
Reactor Filled Percentage:			81%			90%		86%		64%		

Aventis: Cyclanilide-Huls Techn
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./pl
5. Dryer discharge at 0.5% LOD

		R-1110	CF:F1254	D-7100	Packout	Solvent Recovery		Water Recovery		Waste Streams	
Stream No.		12	13	14	15	16	17	18	19	20	21
Description		Precipit'd Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Xylene to Recycle	Recycled Toluene	Water to Recycle	Recycled Water	Organic Waste	Aqueous Waste
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH ₃	54.00										
MeOH	32.00										
H ₂ O	18.00	11,464.0	11,935.3	1,099.6	18.2	1.8		13,034.9	12,736.0	1.8	298.9
NaOH	40.00										
Formic Acid	46.03										
Xylene	106.17					11,750.6	8,345.7			3% 3,405.0	
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00									63% 6,546.7	
Na-RPA 90946	296.10										
RPA 90946	274.10	3,665.2		3,646.9	2,917.5						
NaCHO ₂	68.01	1,693.8	1,693.8					1,693.8			1,693.8
Others	---					364.7				3% 364.7	
Stream Weight, lb/batch		16,823.0	13,629.1	4,746.5	2,935.8	12,117.1	8,345.7	14,728.6	12,736.0	10,318.1	1,992.7
Stream Volume, gal (ft ³)		2,082.0	1,558.2			1,678.4	1,156.0	1,637.2	1,528.9	1,515.6	208.0
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0	68.0	68.0
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft ³)		0.97	1.05			0.87	0.87	1.08	1.00	0.82	1.15
Viscosity, cP (CSt)											
Molar Yield (Overall)		98.0%			{92.2%}						

Reactor Nom. Volume (gal): 4,000.0
 Reactor Filled Percentage: 52%

Aventis: Cyclanilide—Huls Technology Basis—Two (2) Centrifuge Option

Cycle Time Analysis

		Step Cycle Time	Vessel Cycle Time	Rate Limiting Time 27.7 hours
Premix Prep (R-1107)	Charge Toluene	0.5	Σ = 2.8	Total Batch 64.1 hours Time Req'd
	Charge 2,4 DCA	1.3 [Drum]		
	Mix/Hold	1.0		
Coupling Reaction (R-1107)	Charge Premix	0.4	Σ = 9.0	Notes: nn.n indicates calculated value, otherwise value is estimated
	Draw Vacuum	0.3		
	Heat to 56-59°C	0.8		
	Charge Na Methoxide	3.0		
	Distill MeOH/Toluene Azeotrope	2.0		
	Cool to 60-65°C	1.0		
	Charge Water	0.0		
	Transfer to Hydrolysis Rxtr	1.5		
Hydrolysis Reaction (R-1109)	Charge Water	1.5	Σ = 10.0	
	Heat/Reflux	3.0		
	Distill MeOH	2.5		
	Cool Rxtr <50°C	1.0		
	Sample/NaOH Adjust	0.0		
	Phase Separate / Transfer	2.0		
Precipitation (R-1111)	Cool <25°C	1.0	Σ = 6.0	
	Charge Formic Acid	3.0		
	Mix	0.5		
	Sample/Results	0.5		
	Transfer	0.5		
Centrifugation (R-1110, F-1254)	Centrifuge Batch	27.7	Σ = 27.7 (100 kg plow per 8 hrs)	
Drying	Charge 1.5 batches	1.0	Σ = 8.5	
	Dry Batch	6.0		
	Packout	1.5		

Aventis: Cyclanilide-Huls Technology Basis-One (1) Centrifuge Option

Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./plow
5. Dryer discharge at 0.5% LOD

6. All Yield calculations based on DCA

7. ---

8. ---

9. ---

10. ---

R-1107

R-1109

R-1111

Summary of Results

Final Product lb/bx: 2,936 lb
 Limiting Cycle Time: 55.4 hours
 Final Product lb/day: 1,271 lb/day
 Final Product MT/day: 0.6 MT/day

Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Premix Initial Charge	R-7 Charge + Premix	MeOH Strip	O/H Charged Back	Intermed Xferred to R-9	R-9 Water Charge	R-9 Hydr. Intermediate	MeOH Distillat'n	Intermed. Xferred to R-11	Hydrol. Org. Phase to Rec'y	R-11 Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		2,292.8									
2,4 DCA	162.00	2,292.8	2,292.8									
NaOCH ₃	54.00		866.7									
MeOH	32.00		2,022.3									
H ₂ O	18.00						11,464.0	11,464.0		11,464.0		
NaOH	40.00							232.3				
Formic Acid	46.03											1,146.4
Xylene	106.17	3,439.2	11,750.6	160.5	160.5	11,750.6		11,750.6			11,750.6	
(By) Products												
Na-CPMPA	310.10					4,339.8						
MeOH	32.00			3,049.4	3,049.4	3,049.4		447.8	447.8			
Na-RPA 90946	296.10							4,040.2		4,040.2		
RPA 90946	274.10											
NaCHO ₂	68.01											
Others	---											
Stream Weight, lb/batch		5,732.0	19,225.2	3,209.9	3,209.9	19,139.8	11,464.0	27,935.1	447.8	15,504.3	11,750.6	1,146.4
Stream Volume, gal (ft ³)		793.8	2,442.3	484.6	385.3	2,703.2	1,376.2	3,457.3	67.9	1,918.8	1,623.3	116.6
Temperature, °F		100.0	136.0	146.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia (torr)		14.7	14.7	(270)	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft ³)		0.87	0.95	0.80	1.00	0.85	1.00	0.97	0.79	0.97	0.87	1.18
Viscosity, cP (CST)												
Molar Yield (Overall)						96.5%		97.5%				
Reactor Nom. Volume (gal):			3,000.0			3,000.0		4,000.0		3,000.0		
Reactor Filled Percentage:			81%			90%		86%		64%		

Aventis: Cyclanilide--Huls Techn
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./pl
5. Dryer discharge at 0.5% LOD

		R-1110	CF:F1254	D-7100	Packout	Solvent Recovery		Water Recovery		Waste Streams	
Stream No.		12	13	14	15	16	17	18	19	20	21
Description		Precipit'd Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Xylene to Recycle	Recycled Toluene	Water to Recycle	Recycled Water	Organic Waste	Aqueous Waste
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH ₃	54.00										
MeOH	32.00										
H ₂ O	18.00	11,464.0	11,935.3	1,099.6	18.2	1.8		13,034.9	12,736.0	1.8	298.9
NaOH	40.00										
Formic Acid	46.03										
Xylene	106.17					11,750.6	10,982.5			768.1	
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00									6,546.7	
Na-RPA 90946	296.10										
RPA 90946	274.10	3,665.2		3,646.9	2,917.5						
NaCHO ₂	68.01	1,693.8	1,693.8					1,693.8			1,693.8
Others	---					364.7				364.7	
Stream Weight, lb/batch		16,823.0	13,629.1	4,746.5	2,935.8	12,117.1	10,982.5	14,728.6	12,736.0	7,681.3	1,992.7
Stream Volume, gal (ft ³)		2,082.0	1,558.2			1,678.4	1,521.2	1,637.2	1,528.9	1,153.6	208.0
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0	68.0	68.0
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft ³)		0.97	1.05			0.87	0.87	1.08	1.00	0.80	1.15
Viscosity, cP (CSt)											
Molar Yield (Overall)		98.0%			{92.2%}						

Reactor Nom. Volume (gal): 4,000.0
Reactor Filled Percentage: 52%

Aventis: Cyclanilide—Huls Technology Basis—One (1) Centrifuge Option

Cycle Time Analysis

		Step Cycle Time	Vessel Cycle Time	Rate Limiting Time 55.4 hours
Premix Prep (R-1107)	Charge Toluene	<u>0.5</u>		
	Charge 2,4 DCA	<u>1.3</u> [Drum]		
	Mix/Hold	1.0	Σ = 2.8	Total Batch 91.8 hours Time Req'd
Coupling Reaction (R-1107)	Charge Premix	<u>0.4</u>		
	Draw Vacuum	0.3		
	Heat to 56-59°C	0.8		
	Charge Na Methoxide	3.0		
	Distill MeOH/Toluene Azeotrope	2.0		
	Cool to 60-65°C	1.0		
	Charge Water	0.0		
	Transfer to Hydrolysis Rxtr	1.5	Σ = 9.0	Notes: <u>nn.n</u> indicates calculated value, otherwise value is estimated
Hydrolysis Reaction (R-1109)	Charge Water	<u>1.5</u>		
	Heat/Reflux	3.0		
	Distill MeOH	2.5		
	Cool Rxtr <50°C	1.0		
	Sample/NaOH Adjust	0.0		
	Phase Separate / Transfer	2.0	Σ = 10.0	
Precipitation (R-1111)	Cool <25°C	1.0		
	Charge Formic Acid	3.0		
	Mix	0.5		
	Sample/Results	0.5		
	Transfer	0.5	Σ = 6.0	
Centrifugation (R-1110, F-1254)	Centrifuge Batch	<u>55.4</u>	Σ = 55.4 (300 kg plow per 8 hrs)	
Drying	Charge 1.5 batches	1.0		
	Dry Batch	6.0		
	Packout	1.5	Σ = 8.5	

EQ. NO. P-5217
TITLE WATER PUMP
TYPE CENTRIFUGAL
VENDOR DURCO
MATL 316 SS
SIZE 3x1.5x10
HP 5 HP
RPM 1750
CAPACITY 50 GPM
TEMP
PRES.

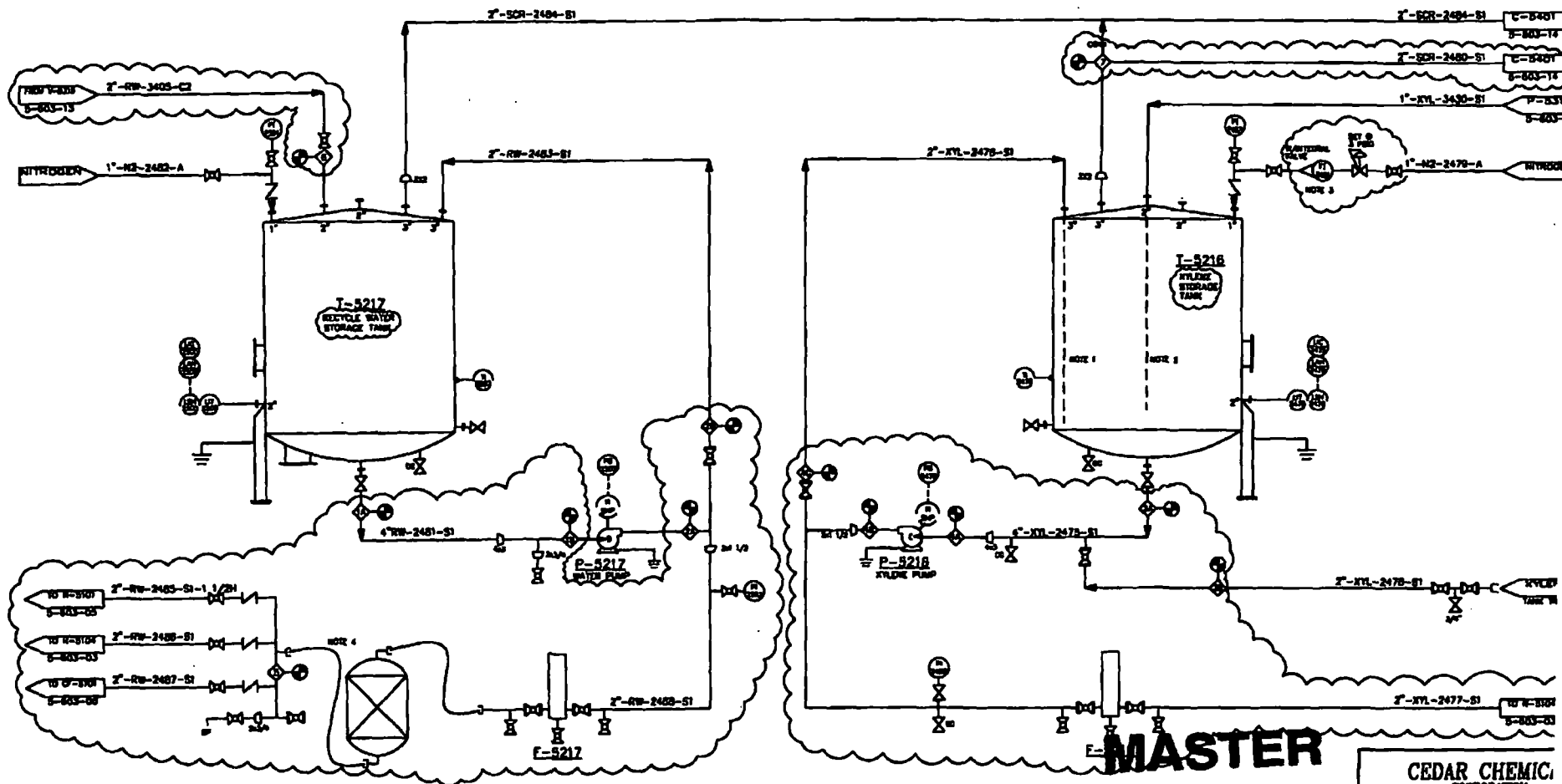
EQ. NO. F-5217
TITLE RECYCLED WATER FILTER
TYPE CARTRIDGE (5 MICRON P.P.)
VENDOR
MATL 316 SS
SIZE 2x2
HP
RPM
CAPACITY
TEMP
PRES.

EQ. NO. T-5217
TITLE XYLENE HOLD TANK
TYPE VERTICAL
VENDOR
MATL 316SS
SIZE 9'-0" O.D. X 36'-8" T/T
HP
RPM
CAPACITY 12,000 GAL
TEMP
PRES.

EQ. NO. P-5218
TITLE XYLENE PUMP
TYPE CENTRIFUGAL
VENDOR CHESTERTON
MATL 316 SS
SIZE 3x1.5x10
HP 5 HP
RPM 1750
CAPACITY 50 GPM
TEMP
PRES. 100 FT

EQ. NO. T-5218
TITLE RECYCLE WATER STORAGE TANK
TYPE VERTICAL
VENDOR
MATL 316SS
SIZE 9'-0" O.D. X 36'-8" T/T
HP
RPM
CAPACITY 12,000 GAL
TEMP
PRES.

EQ. NO. F-5218
TITLE XYLENE FILTER
TYPE CARTRIDGE (5 MICRON CO
VENDOR PARKER FULFO
MATL 316SS
SIZE 2" X 2" INLET/OUTLET
HP
RPM
CAPACITY
TEMP AMBIENT
PRES.



NOTES:

- 2" DIP PIPE WITH 1/4" ANTI-SIPHON HOLE (REMOVABLE).
- 1" DIP PIPE WITH 1/4" ANTI-SIPHON HOLE (REMOVABLE).
- ACCESSIBLE FROM GRADE
- LEASED CARBON ABSORBER

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CEDAR CHEMIC
CORPORATION
WEST HELDEN, MINNESOTA

UNIT 3

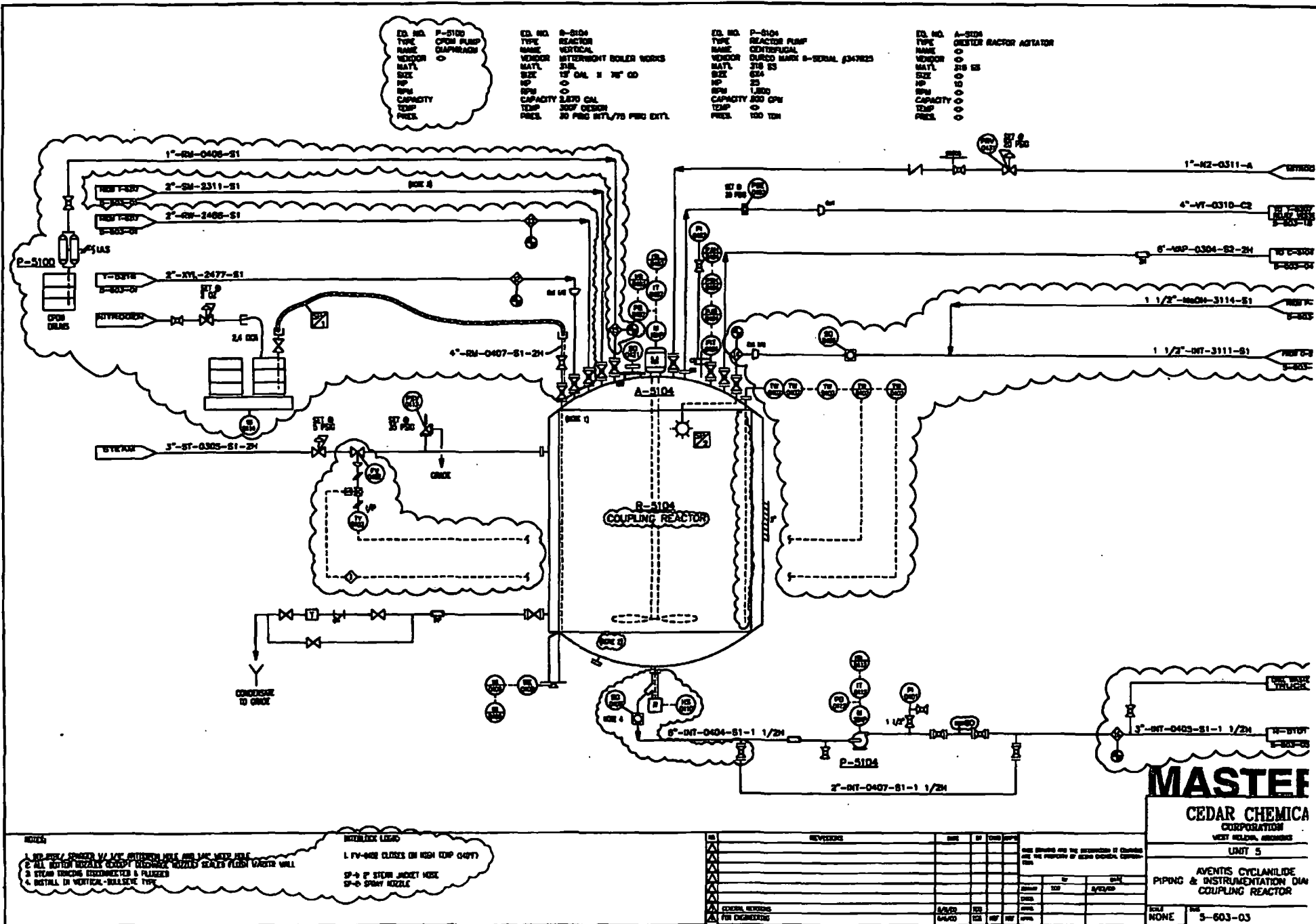
AVANTIS CYCLAMIDE
PIPING & INSTRUMENTATION ON
WATER & XYLENE STORAGE

TOTAL
NONE 5-603-01

EQ. NO.	F-5213
TYPE	FILTER
NAME	CARTRIDGE FILTER
VENDOR	Q
MAT'L	316SS
SIZE	2"x2"
HP	N/A
RPM	N/A
CAPACITY	5 MICRON FILTERS
TEMP	
PRES.	



CEDAR CHEMICAL CORPORATION	
WEST MELBOURNE, ARIZONA	
UNIT FIVE	
AVENTIS CYCLANILIDE PIPING & INSTRUMENTATION DIA SODIUM METHOXIDE STORAGE	
SCALE NONE	DATE 5-803-02



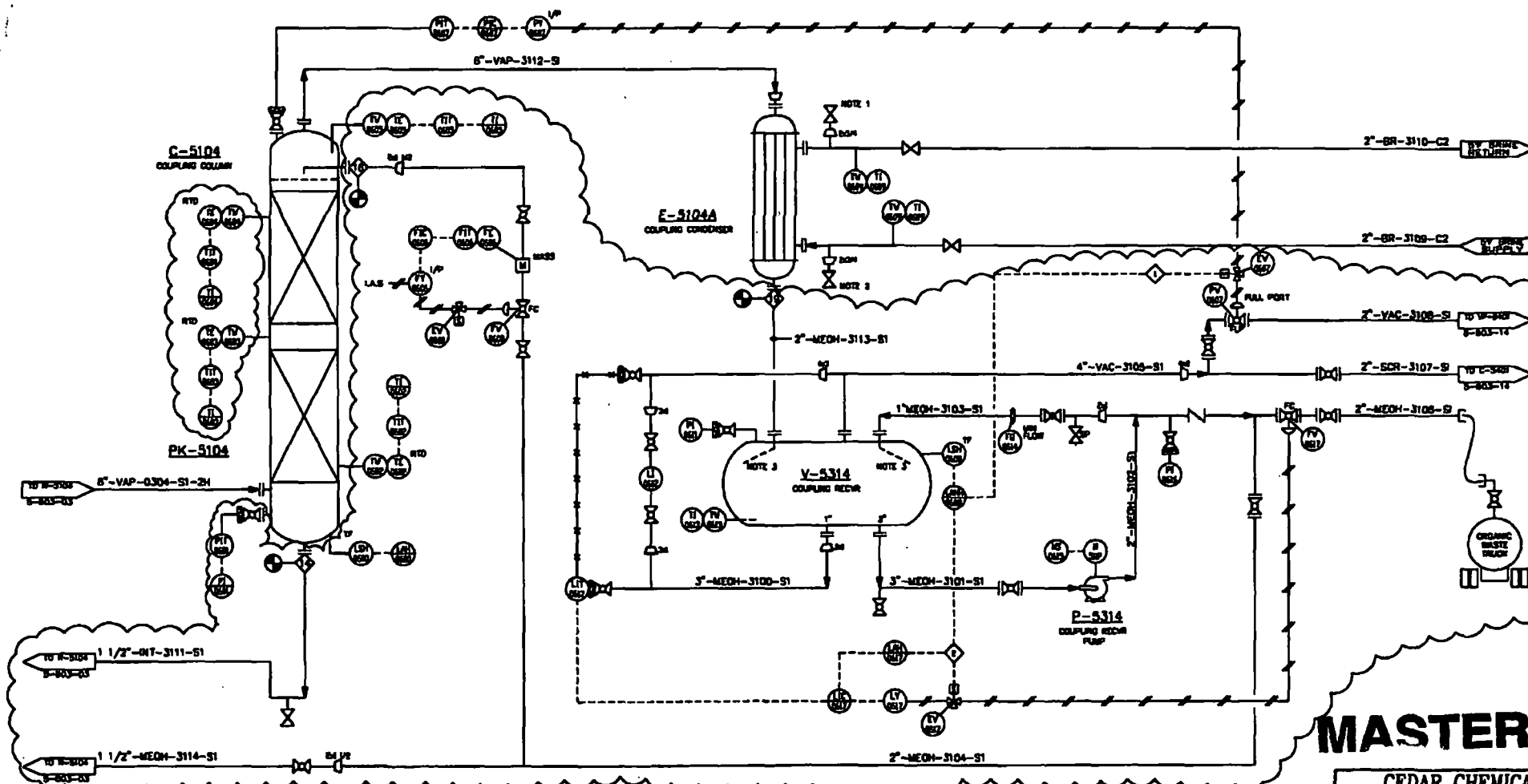
EQ. NO. C-5104
TYPE COUPLING COLUMN
NAME VERTICAL
VENDOR
MATL. 23.8" DIA 2" - 3" / 1
SIZE
HP
RPM
CAPACITY
TEMP
PRES.

EQ. NO. PK-3104
TYPE COUPLING COLUMN PACKING
NAME IT STRUCTURED
VENDOR NORTON
MATL. 304L SS
SIZE
HP
RPM
CAPACITY
TEMP
PRES.

EQ. NO. E-5104A
TYPE COUPLING CONDENSER
NAME
VENDOR
MATL.
SIZE
HP
RPM
CAPACITY
TEMP
PRES.

EQ. NO. V-5314
TYPE COUPLING RECYR
NAME VERTICAL
VENDOR
MATL. 316 SS
SIZE
HP
RPM
CAPACITY
TEMP
PRES. 30 PSIG/V

EQ. NO. P-5314
TYPE COUPLING RECYR PUMP
NAME CENTRIFUGAL
VENDOR OURECO
MATL. 316 SS
SIZE 2x1x10A
HP
RPM
CAPACITY
TEMP
PRES. 90 FT



NOTES:

1. LOCATE AT HIGH POINT DISCHARGING VERTICALLY UP
2. LOCATE AT LOW POINT DISCHARGING VERTICALLY DOWN
3. INSTALL 45° SPLASH LEG DIRECTING FLOW AGAINST VESSEL WALL

INTERLOCK LOGIC:

1. FV-0808 CLOSING ON HIGH LEVEL
2. FV-0817 OPENS ON HIGH LEVEL

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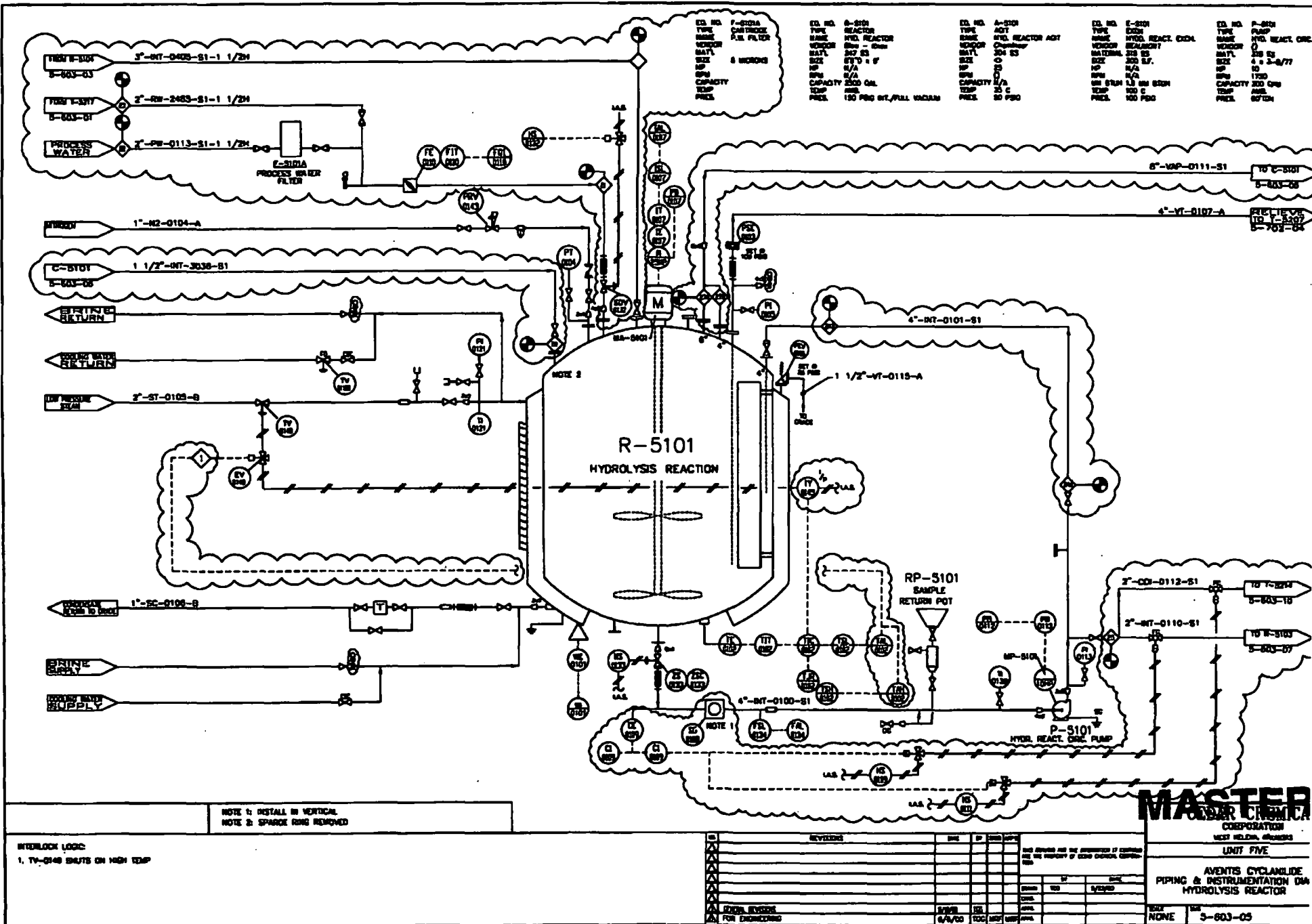
MASTER

CEDAR CHEMICAL CORPORATION
WEST HOLM, ARIZONA

UNIT FIVE

AVENTIS CYCLANILIDE
PIPING & INSTRUMENTATION ON
COUPLING DISTILLATION

DATE: NONE
REV: 5-803-04

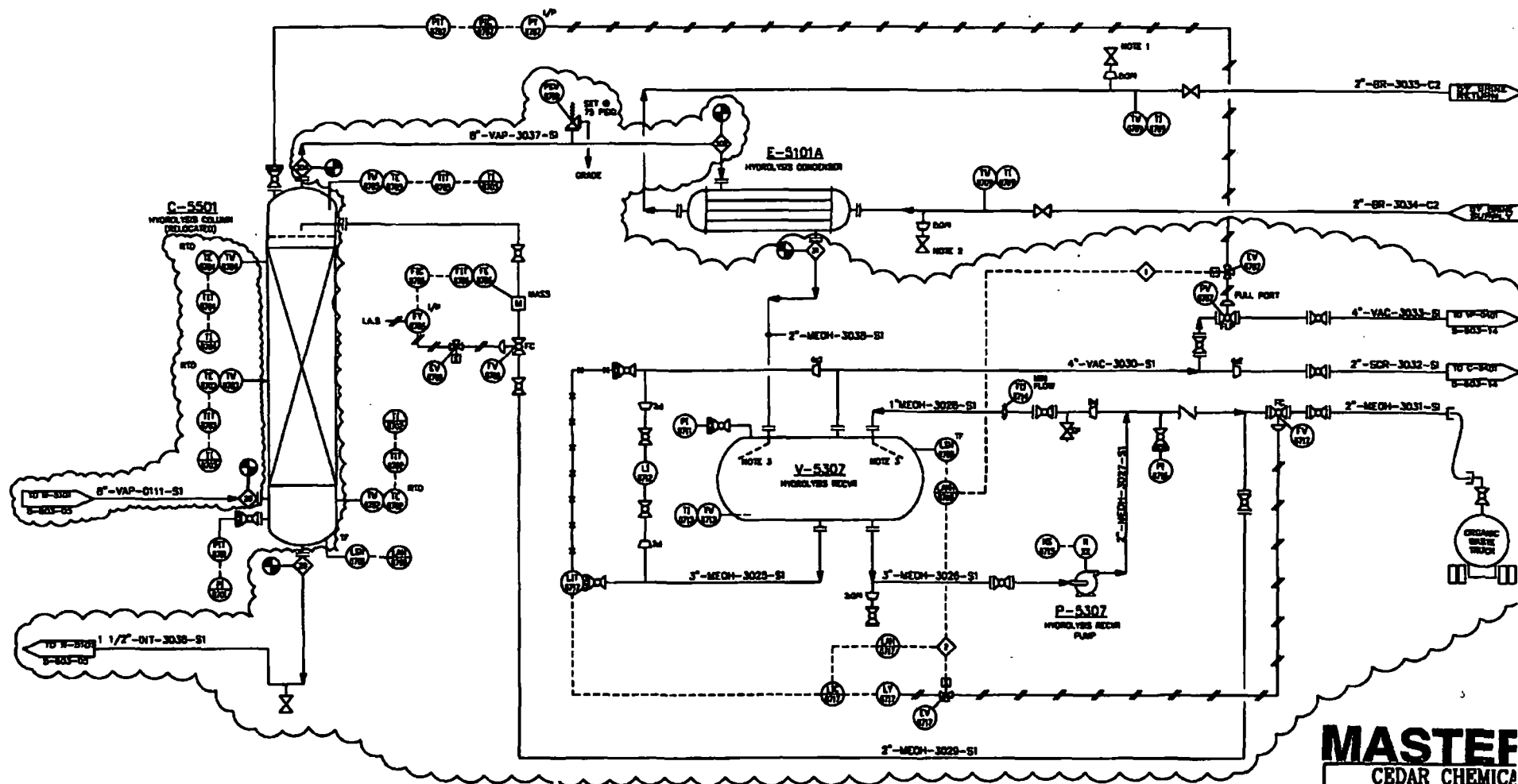


EQ. NO. C-5501
TYPE HYDROLYSIS COLUMN
NAME VERTICAL
VENDOR
MATERIAL
SIZE
HP
RPM
CAPACITY
TEMP
PRES.

EQ. NO. E-5101A
TYPE HYDROLYSIS CONDENSER
NAME
VENDOR
MATERIAL
SIZE
HP
RPM
CAPACITY
TEMP
PRES.

EQ. NO. V-5307
TYPE HYDROLYSIS RECVR
NAME VERTICAL
VENDOR
MATERIAL
SIZE
HP
RPM
CAPACITY
TEMP
PRES.

EQ. NO. P-5307
TYPE HYDROLYSIS RECVR PUMP
NAME CENTRIFUGAL
VENDOR CHESTERTON
MATERIAL
SIZE
HP
RPM
CAPACITY
TEMP
PRES.



NOTES:

1. LOCATE AT HIGH POINT DISCHARGING VERTICALLY UP
2. LOCATE AT LOW POINT DISCHARGING VERTICALLY DOWN
3. INSTALL 45° SPLASH LID DIRECTING FLOW AGAINST VESSEL WALL

INTERLOCK LOGIC:

1. FV-0708 CLOSING ON HIGH LEVEL
2. FV-0717 OPENING ON HIGH LEVEL

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CEDAR CHEMICAL
CORPORATION
WEST HOLDS, ARIZONA

UNIT FIVE
AVENTIS CYCLANILIDE
PIPING & INSTRUMENTATION OF
HYDROLYSIS DISTILLATION
SCALE NONE
NOV 5-803-08

EQ. NO. P-5103B
TYPE DIAPHRAGM PUMP
NAME F.A. PUMP
VENDOR WILCOX
MATL. O
SIZE O
HP O
RPM O
CAPACITY O
TEMP O
PRES. O

EQ. NO. R-5103
TYPE REACTOR
NAME REACTOR
VENDOR O
MATL. QLS
SIZE 6'0" x 6'
HP N/A
RPM N/A
CAPACITY 3000 GAL
TEMP 60 C
PRES. ATM

EQ. NO. A-5103
TYPE AGT
NAME AGT
VENDOR O
MATL. 316 SS
SIZE O
HP O
RPM O
CAPACITY N/A
TEMP 60 C
PRES. ATM

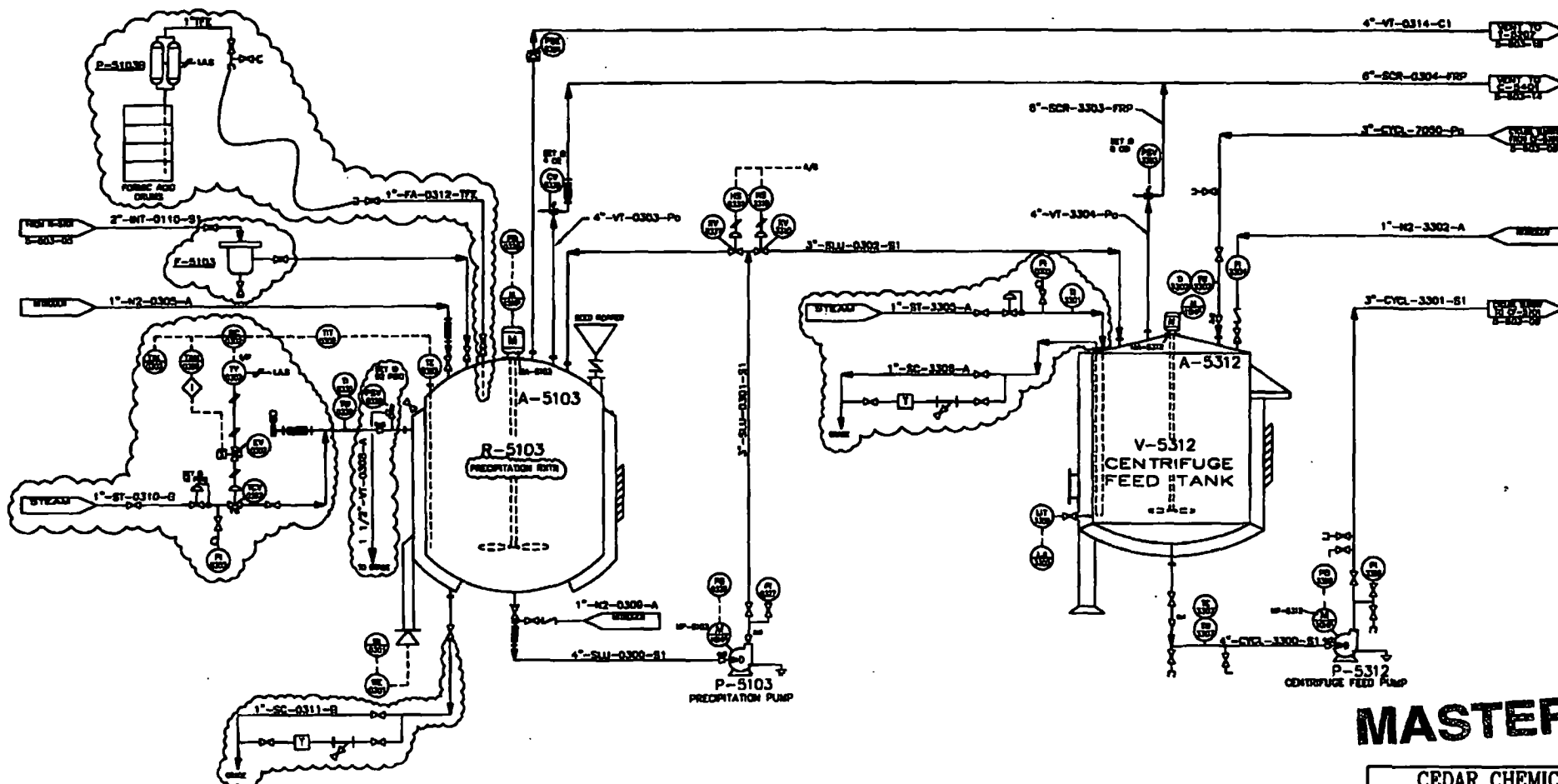
EQ. NO. P-5103
TYPE SLURRY PUMP
NAME SLURRY PUMP
VENDOR O
MATL. 316 SS
SIZE 2 x 2R-10/70
HP 10
RPM 1750
CAPACITY 200 GPM
TEMP 10 C
PRES. 65' TDH

EQ. NO. F-5103
TYPE BAG FILTER
NAME FILTER
VENDOR O
MATL. 316 SS
SIZE 200 MICRON
HP N/A
RPM N/A
CAPACITY O
TEMP O
PRES. O

EQ. NO. V-5312
TYPE TANK
NAME CENTRIFUGE FEED TANK
VENDOR O
MATL. SS
SIZE 9'0" x 9' x 5'
HP N/A
RPM N/A
CAPACITY 5000 GAL
TEMP 10 C
PRES. ATM

EQ. NO. P-5312
TYPE PUMP
NAME CENTRIFUGE FEED PUMP
VENDOR O
MATL. 316 SS
SIZE 2 x 2R-10/80
HP 10
RPM 1750
CAPACITY 200 GPM
TEMP 60 C
PRES. 60' TDH

EQ. NO. A-5312
TYPE AGT
NAME AGT
VENDOR O
MATL. 316 SS
SIZE O
HP O
RPM O
CAPACITY N/A
TEMP 10 C
PRES. ATM



MASTER

CEDAR CHEMICAL CORPORATION
WEST MELEN, ARIZONA

UNIT FME

AVENTIS CYCLANILIDE
PIPING & INSTRUMENTATION OF
PRECIPITATION & CF FEED T.

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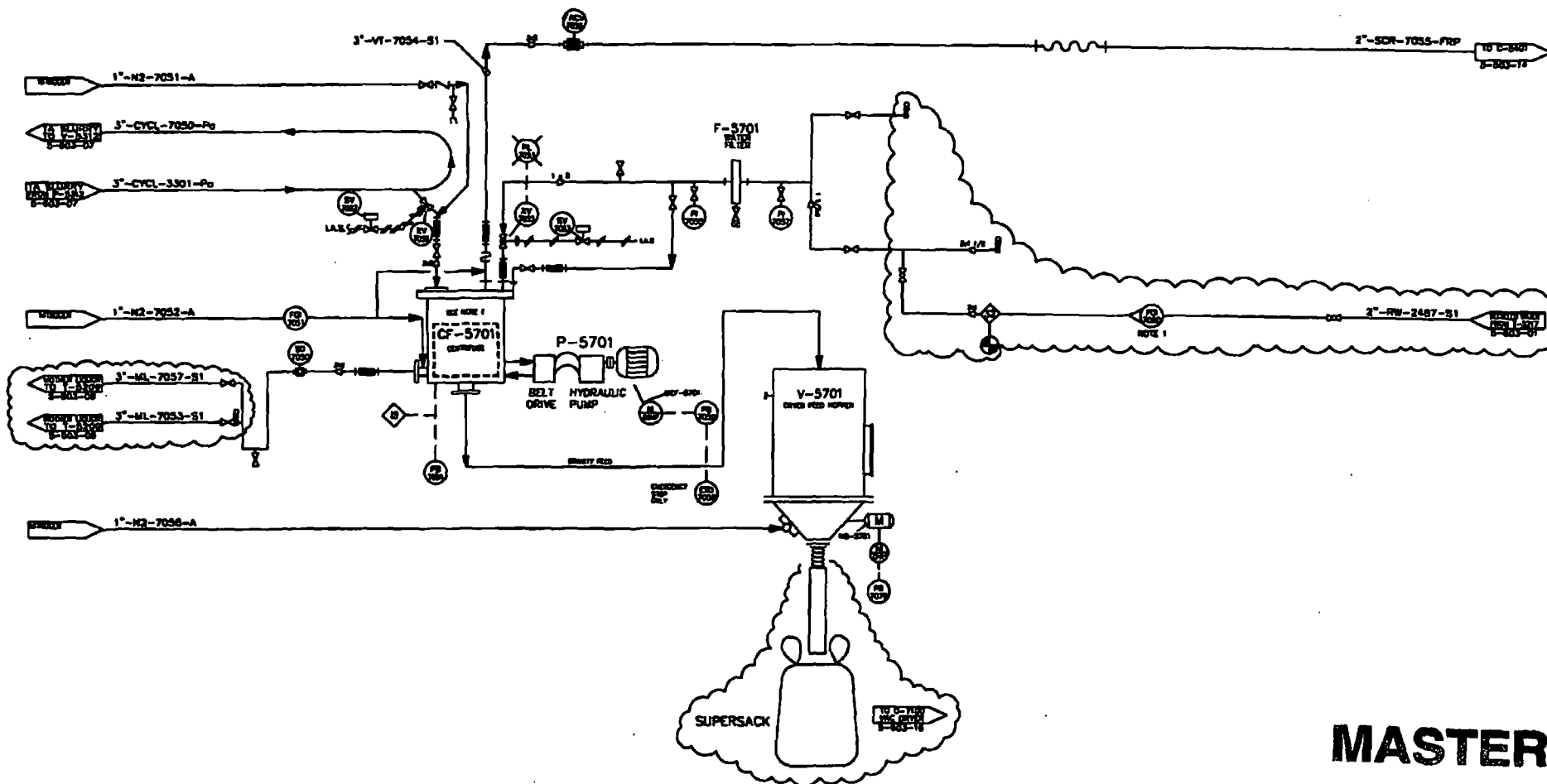
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EQ. NO. CF-5701
TYPE CENTRIFUGE
NAME SHARPLES
VENDOR 304 SS
MATERIAL 48" x 30"
SIZE 80
HP 900
RPM N/A
CAPACITY 18 CU. FT.
TEMP 10 C
PRES. ATM

EQ. NO. F-5701
TYPE CARTRIDGE
NAME WATER FILTER
VENDOR COMMERCIAL FILTERS
MATERIAL FALLO MODEL 653220-3/450
SIZE 3" DIA x 23"
HP N/A
RPM N/A
CAPACITY 0
TEMP 175 PS @ 200 F
PRES. 150 PS @ 250 F

EQ. NO. V-5701
TYPE HOPPER
NAME DRYER FEED HOPPER
VENDOR 304 SS
MATERIAL 30" x 4"
SIZE 2
HP N/A
RPM N/A
CAPACITY 25 CU. FT.
TEMP AMB.
PRES. ATM



MASTER

INTERLOCK LOGIC

(1) CF-5701 WILL SHUT DOWN WHEN OUT OF BALANCE.

NOTE:

1. ACCESSIBLE FROM COVERFLUX

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CEDAR CHEMICAL CORPORATION
WEST HELIX, ARIZONA
UNIT FIVE

AVANTIS CYCLANILIDE
PIPING & INSTRUMENTATION DIA
CENTRIFUGATION, DRYING, AND P

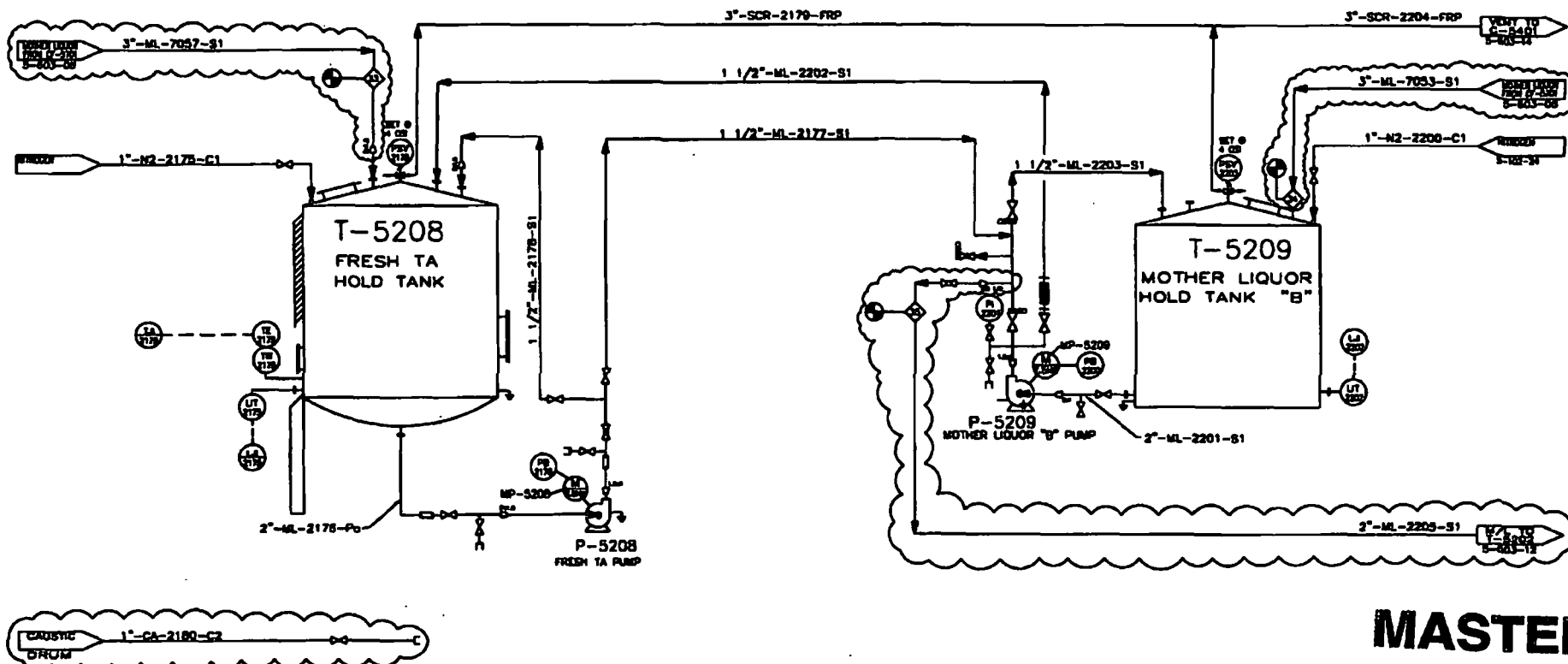
SCALE NONE
5-803-08

EQ. NO. T-5208
TYPE TANK
NAME FRESH TA HOLD
VENDOR O
MATL 316 SS
SIZE 9'D x 9'
HP N/A
RPM N/A
CAPACITY 4000 GAL
TEMP 80 C
PRES. ATM

EQ. NO. P-5208
TYPE PUMP
NAME FRESH TA
VENDOR DUNCO
MATL 316 SS
SIZE 1.5 x 1-8/70
HP 7.5
RPM 3600
CAPACITY 10 GPM
TEMP 80 C
PRES. 200' TDH

EQ. NO. T-5209
TYPE TANK
NAME MOTHER LIQUOR HOLD
VENDOR O
MATL 304 SS
SIZE 7'-0"D x 14'-0"
HP N/A
RPM N/A
CAPACITY 4000 GAL
TEMP AMS
PRES. ATM

EQ. NO. P-5209
TYPE PUMP
NAME MOTHER LIQUOR
VENDOR DUNCO
MATL 316 SS
SIZE 1.5 x 1-8/74
HP 7.5
RPM 1750
CAPACITY 10 GPM
TEMP AMS
PRES. 60' TDH



MASTER

CEDAR CHEMICAL CORPORATION
WEST HOLM, ARIZONA

UNIT FIVE

AVENTS CYCLANILIDE
PIPING & INSTRUMENTATION ON
FRESH TA & MOTHER LIQUOR I

ISSU NONE REV 5-603-09

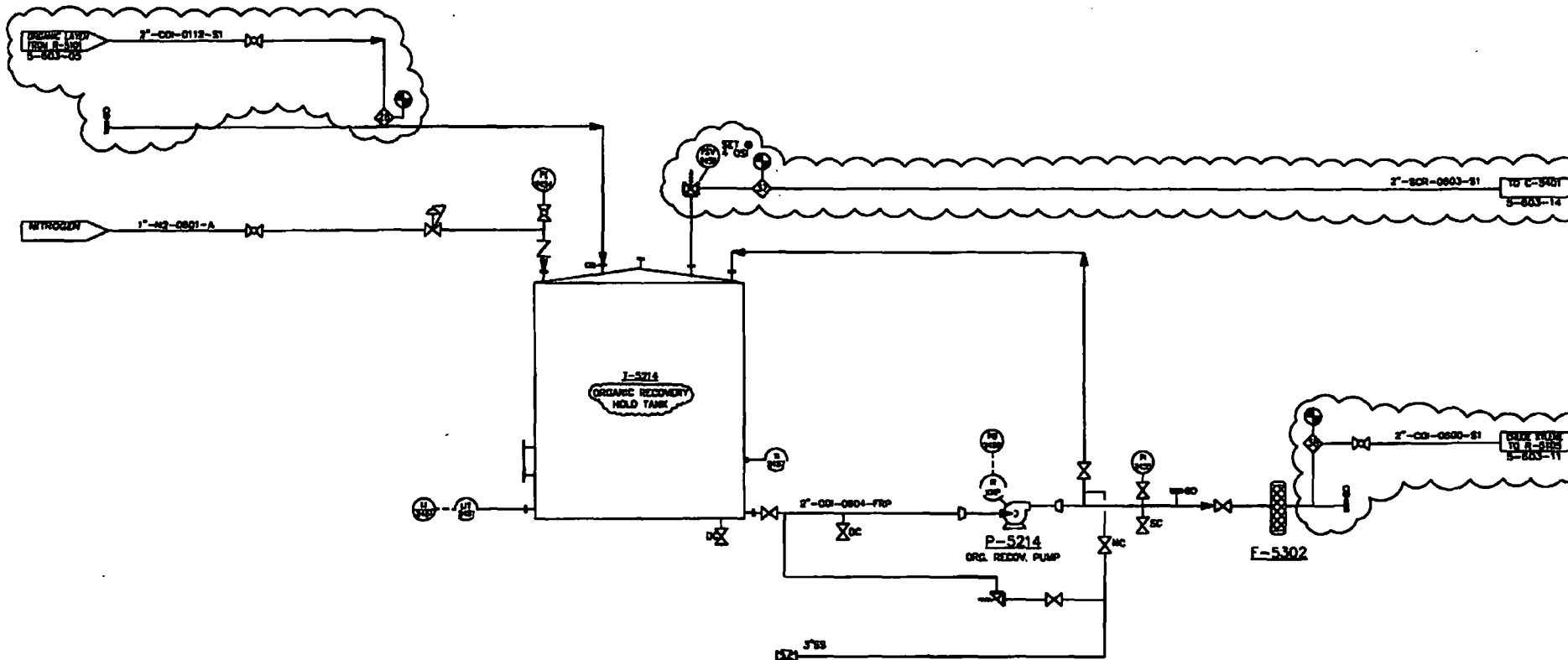
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8/19/00	100	100

EQ. NO. I-5214
 TITLE ORG. RECOV. HOLD TANK
 TYPE VERTICAL
 VENDOR CS LIND
 MATL CS LIND
 SIZE 0
 HP 0
 RPM 0
 CAPACITY 17,000 GAL
 TEMP 0
 PRES 0

EQ. NO. P-5214
 TITLE ORG. RECOV. PUMP
 TYPE CENTRIFUGAL
 VENDOR DUKES MARK I
 MATL 316 SS
 SIZE 3 X 1.5 - 0
 HP 0
 RPM 1800
 CAPACITY 140 GPM
 TEMP 0
 PRES 100' TDI

EQ. NO. F-5302
 TITLE CARTRIDGE
 TYPE 0
 VENDOR 0
 MATL 0
 SIZE 100 MICRON
 HP 0
 RPM 0
 CAPACITY 0
 TEMP 0
 PRES 0



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CEDAR CHEMICAL CORPORATION	
WEST HELDIA, ARIZONA	
UNIT 5	
AVENTS CYCLANILIDE	
PIPING & INSTRUMENTATION DIA	
ORGANIC RECOVERY STORAGE	
DATE	REV
NONE	5-603-10

REV	DESCRIPTION	DATE	BY	CHKD	APPD	NOTED	DATE
1	ORIGINAL REVISIONS	5/10/00	TSD				
2	FOR ENGINEERING	5/14/00	TSD	WJ	WJ		

EQ. NO. P-5105
TYPE PUMP
NAME SOLV. REC. WASTE PUMP
VENDOR DUNCO
MTRL 316 SS
SIZE 3 x 1.5-8/74
HP 1750
RPM 1750
CAPACITY 100 GPM
TEMP 100 C
PRES. 50' TDH

EQ. NO. R-5105
TYPE REACT
NAME SOLV. REC. POT
VENDOR O
MTRL OLS
SIZE 8'-0" D x 8'-5"
HP N/A
RPM N/A
CAPACITY 4000 GAL
TEMP 100 C
PRES. ATM

EQ. NO. E-5105
TYPE EXCH
NAME SOLV. REC. COND.
VENDOR O
MATERIAL 304 SS
SIZE 130 S.F.
HP N/A
RPM N/A
NM BRUN 0000
TEMP 85 C
PRES. 75 PSIG

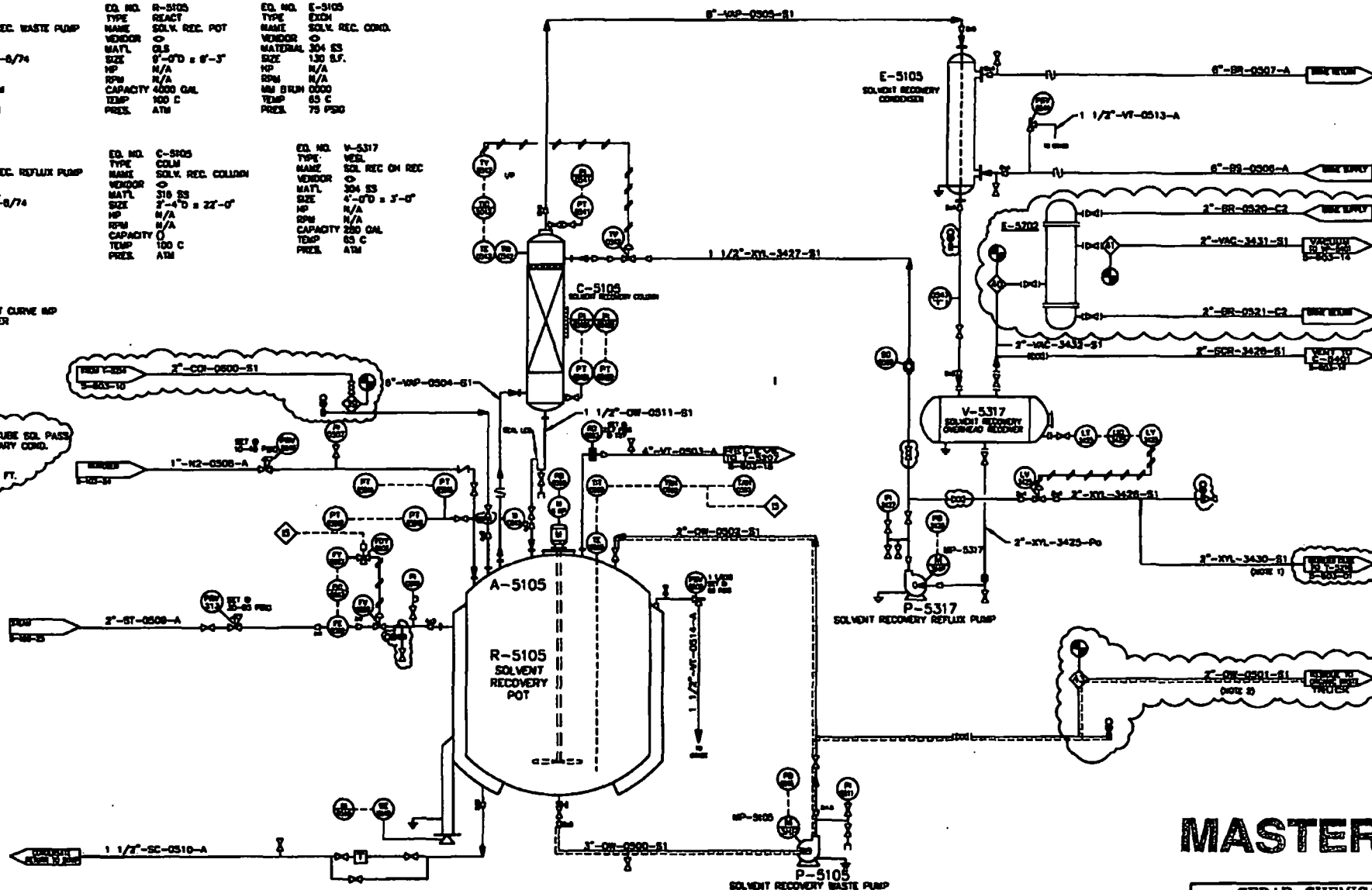
EQ. NO. P-5317
TYPE PUMP
NAME SOLV. REC. REFLUX PUMP
VENDOR DUNCO
MTRL 316 S.S.
SIZE 1.5 x 1-8/74
HP 2
RPM 1750
CAPACITY 20 GPM
TEMP 50 C
PRES. 50' TDH

EQ. NO. C-5105
TYPE COLM
NAME SOLV. REC. COLLUM
VENDOR O
MTRL 316 SS
SIZE 2'-4" D x 22'-0"
HP N/A
RPM N/A
CAPACITY 100 C
TEMP 100 C
PRES. ATM

EQ. NO. V-5317
TYPE VESL
NAME SOL. REC. OH REC
VENDOR O
MTRL 304 SS
SIZE 4'-0" D x 3'-0"
HP N/A
RPM N/A
CAPACITY 200 GAL
TEMP 85 C
PRES. ATM

EQ. NO. A-5105
TYPE SOTW
NAME RETREAT CURVE M/P
VENDOR PFALZDER
MTRL GLASS
SIZE 25
HP
RPM
CAPACITY
TEMP
PRES.

EQ. NO. E-5702
TYPE SHELL/TUBE SOL. PASS
NAME SECONDARY COND.
VENDOR O
MTRL 304 SS
SIZE 100 SQ. FT.
HP
RPM
CAPACITY
TEMP
PRES.



INTERLOCK LOGIC
STEAM VALVE (20-0000) IS A CLOSED
BY THE LOSS OF POWER TO THE (2000)

NOTES
1. COOLING LINE
2. STEAM TRACE & INSULATE ALL CHG & COOL PUMP

REV	DESCRIPTION	DATE	BY	CHKD	APPD
1	ISSUED FOR CONSTRUCTION	5/15/80	WJ		
2	FOR CONSTRUCTION	5/16/80	WJ		

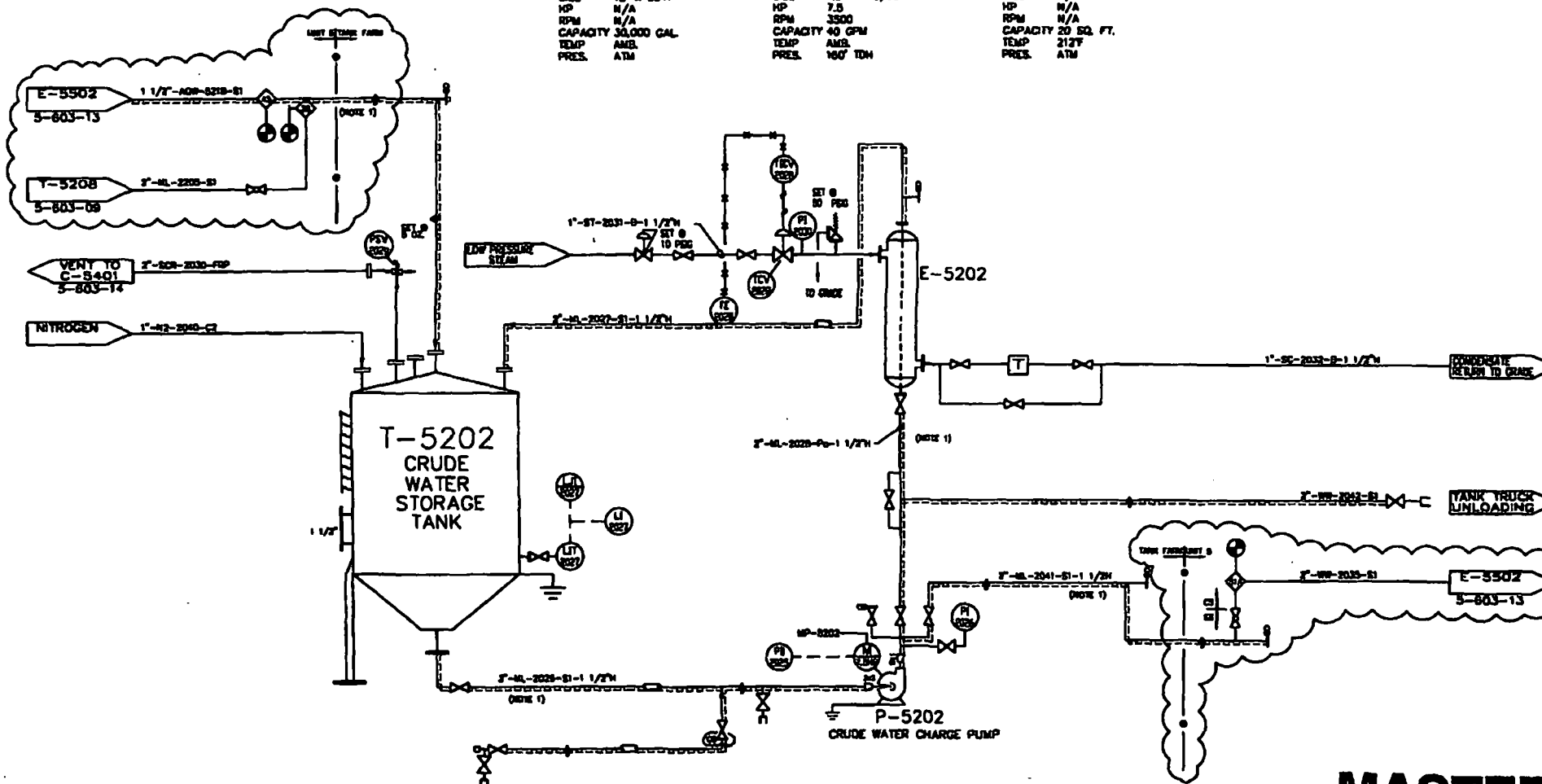
MASTER

CEDAR CHEMICAL CORPORATION WEST HOLDS, ARIZONA	
UNIT FIVE	
AVENTS CYCLANILIDE PIPING & INSTRUMENTATION ON STRIPPING & SOLVENT RECO	
DATE	5-603-11

EQ. NO. T-5202
TYPE TANK
NAME CRUDE WATER STG. TANK
VENDOR O
MATL 316SS
SIZE 12' X 36'H
HP N/A
RPM N/A
CAPACITY 30,000 GAL.
TEMP AMB.
PRES. ATM

EQ. NO. P-5202
TYPE PUMP
NAME CRUDE WATER CHG. PUMP
VENDOR DURCO
MATL 316 SS
SIZE 1.5 X 1-8/BJ
HP 7.5
RPM 3500
CAPACITY 40 GPM
TEMP AMB.
PRES. 160' TON

EQ. NO. E-5202
TYPE DOUBLE PIPE
NAME CRUDE WATER STG. TANK HEATER
VENDOR O
MATL 316SS/C.S.
SIZE N/A
HP N/A
RPM N/A
CAPACITY 20 SQ. FT.
TEMP 212°F
PRES. ATM



MASTER

NOTE:
(1) EXHAUST TRADING USED FOR FREEZE PROTECTION ONLY

NO.	REVISION	DATE	BY	CHKD.	APP.
1	ORIGINAL DESIGN	8/15/80	100		
2	FOR CONSTRUCTION	8/15/80	100	100	

CEDAR CHEMICAL CORPORATION	
WEST HOLLOM, ARIZONA	
UNIT FIVE	
AVANTIS CYCLANLIDE RAW MATERIAL STORAGE & HAP	
DATE	NO.
NONE	3-603-12

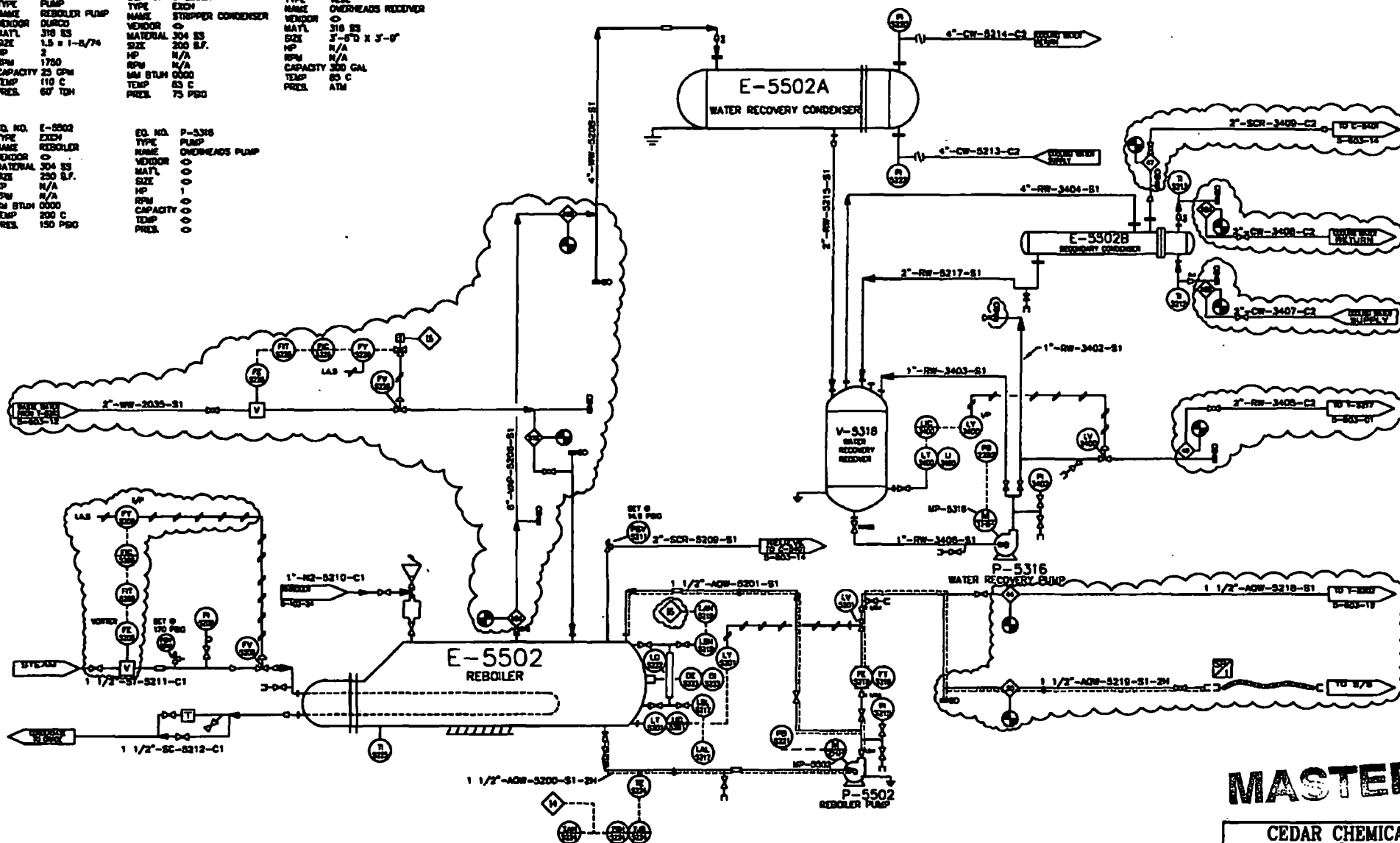
EQ. NO. P-3202
TYPE PUMP
NAME REBOILER PUMP
VENDOR DURCO
MATERIAL 316 SS
SIZE 1.5 x 1-3/4
HP 2
RPM 1750
CAPACITY 25 GPM
TEMP 110 C
PRESS. 60 TSH

EQ. NO. E-5502A
TYPE STRIPPER CONDENSER
VENDOR O
MATERIAL 304 SS
SIZE 250 S.F.
HP N/A
RPM N/A
MOM STUN 0500
TEMP 85 C
PRESS. 75 PSIG

EQ. NO. V-5318
TYPE VESL
NAME OVERHEADS RECEIVER
VENDOR O
MATERIAL 316 SS
SIZE 5'-5" D X 3'-0"
HP N/A
RPM N/A
CAPACITY 300 GAL
TEMP 85 C
PRESS. ATM

EQ. NO. E-5502
TYPE REBOILER
VENDOR O
MATERIAL 304 SS
SIZE 250 S.F.
HP N/A
RPM N/A
MOM STUN 0500
TEMP 200 C
PRESS. 150 PSIG

EQ. NO. P-5316
TYPE OVERHEADS PUMP
VENDOR O
MATERIAL 316 SS
SIZE 1
HP 1
RPM 1750
CAPACITY 200 C
PRESS. O



STEAM SUPPLY TEMPERATURE CONTROL VALVE(TV-5208) WILL CLOSE WHEN

1. E-5502 REACHES HIGH TEMPERATURE 212°F. (TSH-5224)
2. CLOSER LV-5301 ON HIGH LEVEL

SP-1: 1 1/2" LOADING HOSE, CONVOLUTED,
316 SS WITH INTEGRAL JACKET

NO.	REVISION	DATE	BY	CHKD	APPD	THIS DRAWING AND THE INFORMATION IT CONTAINS ARE THE PROPERTY OF CEDAR CHEMICAL CORPORATION
1	GENERAL REVISION FOR CHANGES	8/10/80	TSC			
2		8/10/80	TSC			
3		8/10/80	TSC			
4		8/10/80	TSC			
5		8/10/80	TSC			
6		8/10/80	TSC			
7		8/10/80	TSC			
8		8/10/80	TSC			
9		8/10/80	TSC			
10		8/10/80	TSC			

MASTER

CEDAR CHEMICAL CORPORATION	
WEST WELDON, VIRGINIA	
UNIT FIVE	
AVANTIS CYCLAMIDE PIPING & INSTRUMENTATION DATA WATER RECOVERY	
SCALE	5-603-13

EQ. NO. V-5401
TYPE VESSEL
NAME VACUUM PUMP H.Q. POT
VENDOR
MATERIAL SS
SIZE N/A
HP N/A
RPM N/A
CAPACITY 500 GAL
TEMP AMB.
PRES. FULL VACUUM

EQ. NO. V-5402
TYPE VESSEL
NAME VACUUM EXHAUST H.Q. POT
VENDOR
MATERIAL SS
SIZE N/A
HP N/A
RPM N/A
CAPACITY 200 GAL
TEMP AMB.
PRES. ATM

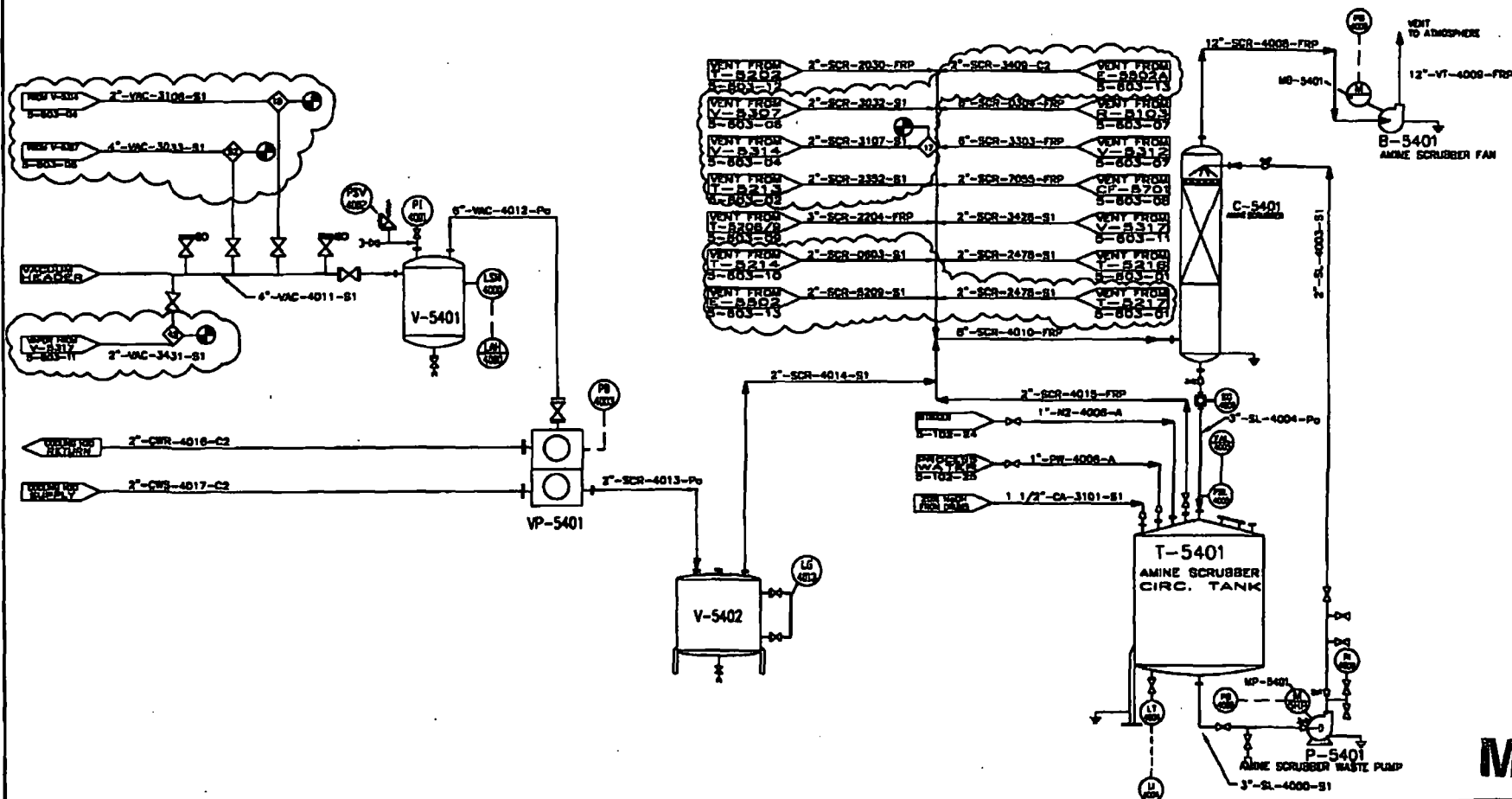
EQ. NO. T-5401
TYPE TANK
NAME AMINE SCRUBBER CIRC. TANK
VENDOR
MATERIAL PPL
SIZE 6'D X 7'-5"
HP N/A
RPM N/A
CAPACITY 1800 GAL
TEMP AMB.
PRES. ATM

EQ. NO. P-5401
TYPE PUMP
NAME AMINE SCRUBBER CIRC. PUMP
VENDOR
MATERIAL 316 SS
SIZE 2IN-10/100
HP 5
RPM 1750
CAPACITY 75 GPM
TEMP AMB.
PRES. 100' TDM

EQ. NO. B-5401
TYPE FAN
NAME AMINE SCRUBBER
VENDOR
MATERIAL FRP
SIZE
HP N/A
RPM N/A
CAPACITY 2500 CFM
TEMP AMB.
PRES. 12" WC

EQ. NO. C-5401
TYPE COLUMN
NAME AMINE SCRUBBER
VENDOR
MATERIAL 316 SS
SIZE 3'-6"D X 15'-0"
HP N/A
RPM N/A
CAPACITY 2200 CFM
TEMP AMB.
PRES. ATM

EQ. NO. C-5402
TYPE COLUMN
NAME AMINE SCRUBBER COLUMN
VENDOR
MATERIAL
SIZE
HP N/A
RPM N/A
CAPACITY
TEMP
PRES.



MASTE

CEDAR CHEMICAL CORPORATION
WEST HOLMA, ARIZONA

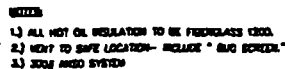
UNIT FIVE

AVANTIS CYCLANILIDE
PIPING & INSTRUMENTATION DIA
VACUUM AND SCRUBBER SYST

DATE 5-603-14

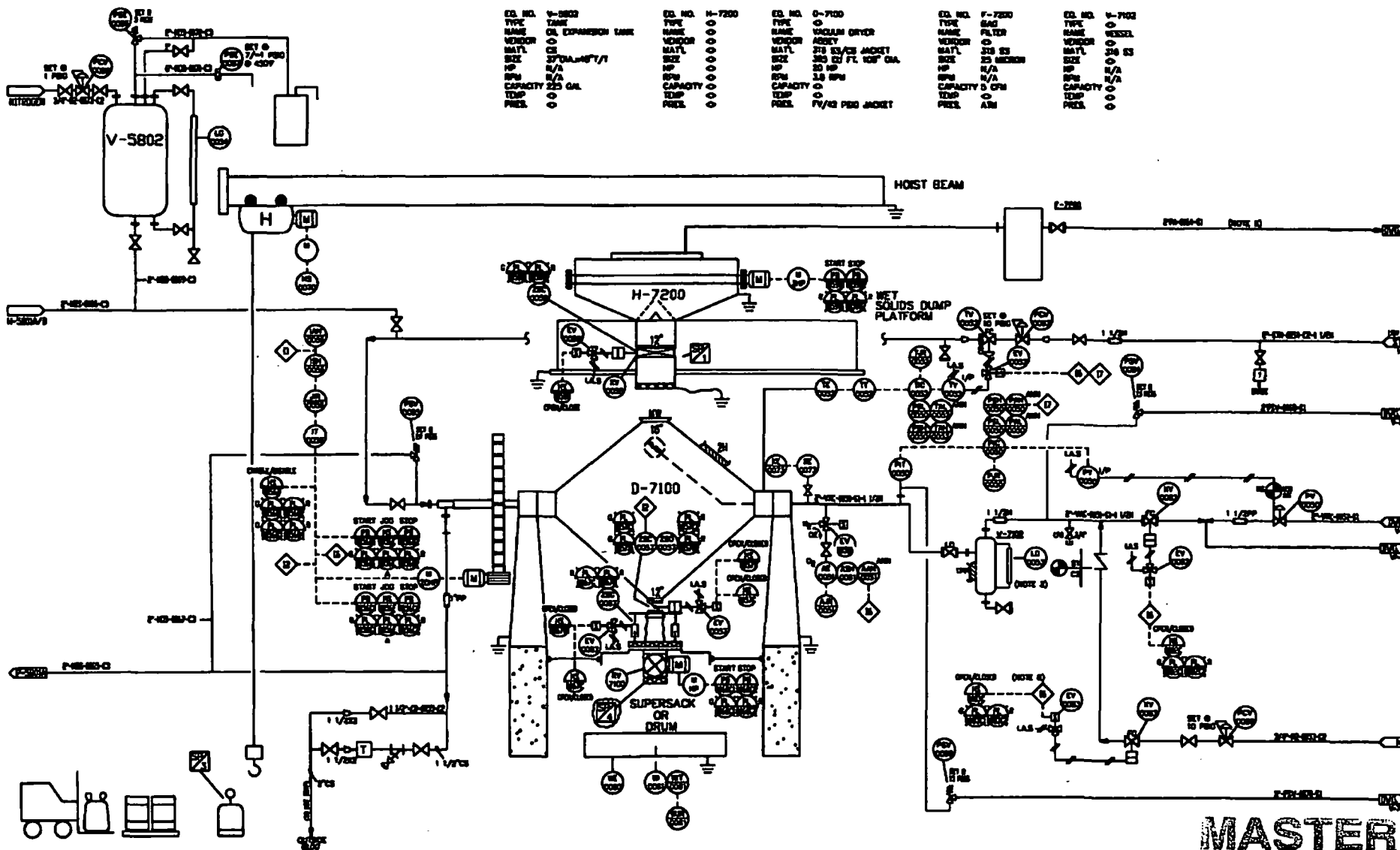
NO.	REVISIONS	DATE	BY	CHKD	APPD	DESCRIPTION
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EQ. NO.	E-5801
TYPE	EXCHANGER
NAME	NOT OIL COOLER
VENDOR	HUDSON
MAT'L	225 FT BARE
SIZE	6
HP	7
RPM	0
CAPACITY	1.71M BTU/HR
TEMP	425 F
PRSS	25 PSIG



NAME	AGE	DATE
NAME		
NAME		
NAME		

MARK	PG
NONE	9-603-15



EQ. NO.	V-5802	EQ. NO.	H-7200	EQ. NO.	D-7100	EQ. NO.	F-7200	EQ. NO.	V-7100
TYPE	TANK	TYPE	TANK	TYPE	VACUUM DRYER	TYPE	FLTR	TYPE	FLTR
NAME	CL. EXPANSION UNIT	NAME	CL. EXPANSION UNIT	NAME	CL. EXPANSION UNIT	NAME	CL. EXPANSION UNIT	NAME	CL. EXPANSION UNIT
MATL.	SS	MATL.	SS	MATL.	SS	MATL.	SS	MATL.	SS
SIZE	37 DIA. 10 FT. 11	SIZE	37 DIA. 10 FT. 11	SIZE	37 DIA. 10 FT. 11	SIZE	37 DIA. 10 FT. 11	SIZE	37 DIA. 10 FT. 11
HP	250 HP	HP	250 HP	HP	250 HP	HP	250 HP	HP	250 HP
SPR	250 GPM	SPR	250 GPM	SPR	250 GPM	SPR	250 GPM	SPR	250 GPM
CAPACITY	250 GAL	CAPACITY	250 GAL	CAPACITY	250 GAL	CAPACITY	250 GAL	CAPACITY	250 GAL
TEMP	0	TEMP	0	TEMP	0	TEMP	0	TEMP	0
PRSS.	0	PRSS.	0	PRSS.	0	PRSS.	0	PRSS.	0

MASTER

NOTES

1. ALL BOOTS TO BE CARBON FILLED PITTS FOR ELECT. RESISTANCE
2. ALL CONNECTIONS TO BE ELECTRICALLY BONDED
3. ALL TO BE FAS-PLAZZ STYLE W/CLASH GLASS
4. LOCATED ON MEZANINE AND GROUND LEVEL

5. ROUTE TO SAFE LOCATION
6. ROUTE ABOVE ROOF W/BAIN KEY
7. IS PROTECTIVE THERM 0 30 NOS
8. FLANGE 0 87 JTS

INTERLOCK LOGIC

1. HIGH AMP S/D DRYER MOTOR
2. SSC-DRYER MUST BE SWITCHED TO OPERATE H-7200
3. LOW LEVEL STOPS H-7100
4. HIGH LEVEL STOPS H-7100
5. H-7100 CLOSING VENT, OPEN H-7200
6. STOP VACUUM PUMP, STOPS DRYER/STOPS HEAT INPUT

17 - HIGH PRESS S/D STEAM

SPECIALTY ITEMS

1. TRANSITION
2. PNEUMATIC LID SEALER
3. VENT LATCH/QUIP
4. SWICH 507ER

NO.	REVISION	DATE	BY	CHKD	APPR.
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CEDAR CHEMICAL CORPORATION

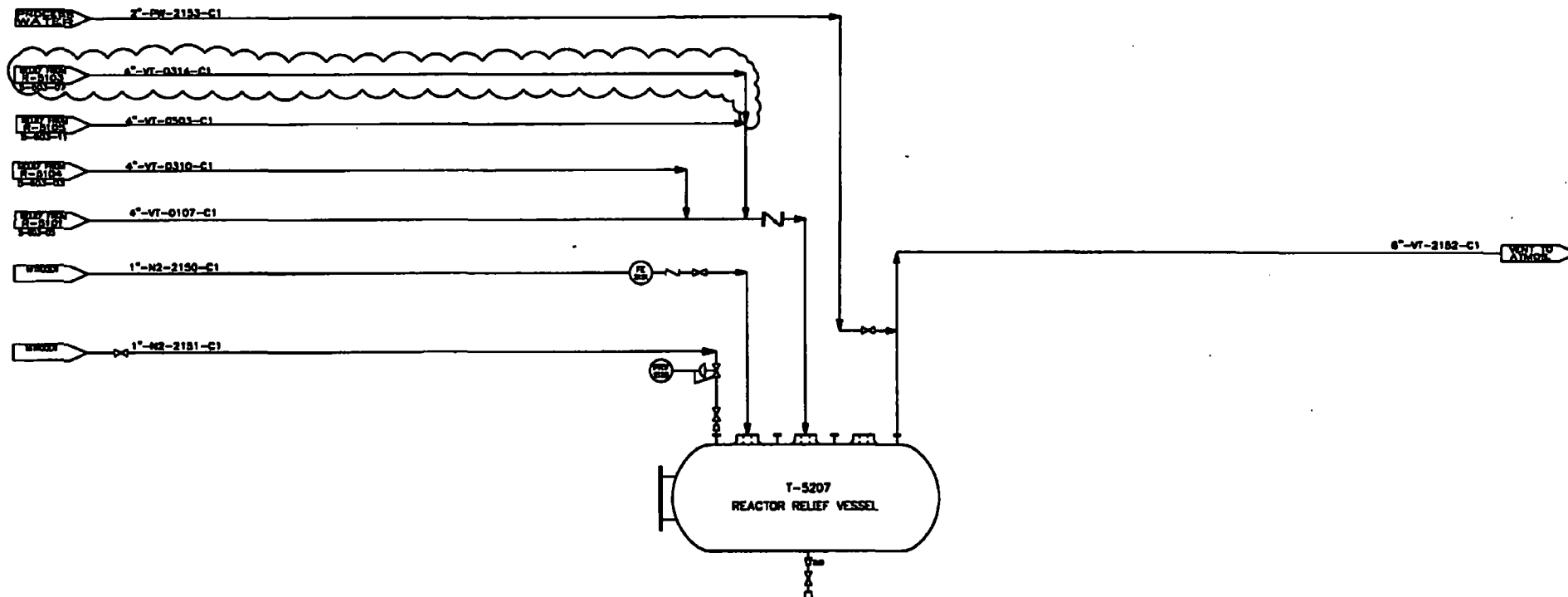
WEST HOLLAND, INDIANA

UNIT 5

AVANTIS CYCLANILIDE
PIPING & INSTRUMENTATION DIAG

DATE: NONE
REV: 5-603-18

EQ. NO. T-5207
 TYPE REEL
 NAME REACTOR RELIEF VESSEL
 VENDOR Taylor - Forge
 MATL 316 SS
 SIZE 8'0" x 18'
 HP N/A
 RPM N/A
 CAPACITY 2500 GAL
 TEMP 40 C
 PRES. 1100 PSIG



MASTER

REVISIONS				DATE				BY				DATE			
1	GENERAL REVISIONS	8/18/00	TGC												
2	FOR ENGINEERING	8/18/00	TGC	MEP	WFF	APR									

CEDAR CHEMICAL
 CORPORATION
 WEST HENRI, ARIZONA

UNIT FIVE

AVENTIS CYCLANILIDE
 PIPING & INSTRUMENTATION DIA
 VENT CONDENSER & RELIEF VE

TGC NONE 5-603-18

SAFETY DATA SHEET

Publication date : 22/01/92

Sheet number: 1034

Revised on : 30/05/00

1) IDENTIFICATION OF THE SUBSTANCE/PREPARATION

Commercial name :

CYCLANILIDE TECHNICAL

Company identification :

AVENTIS CropScience SA
55, avenue René Cassin
69009 LYON
FRANCE

Emergency numbers :

Tél: 04 72 85 25 25 ---- Fax: 04 72 85 27 99

Official advisory body :

ORPILA Téléphone 01 45 42 59 59

2) COMPOSITION / INFORMATION ON INGREDIENTS

GIFAP code : TC

Cyclanilide..... 100 %

- CAS number : 113136-77-9

3) HAZARDS IDENTIFICATION

HARMFUL

DANGEROUS FOR THE ENVIRONMENT

Harmful if swallowed (R 22)

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic (R 51/53)

4) FIRST AID MEASURES

After contact with skin, wash immediately with plenty of water (S 28)

In case of contact with eyes, rinse immediately with plenty of water for 20 minutes.

If swallowed, seek medical advice immediately and show this container or label (S 46)

If you feel unwell, seek medical advice (show the label where possible)

5) FIRE-FIGHTING MEASURES

Combustible, danger of toxic gases in smoke :

- Carbon and nitrogen oxides, hydrochloric gas

Avoid the escape of fire-fighting water to the environment.

Recommended fire-fighting media: foam, carbon dioxide, dry powders, waterspray.

Wear self-contained breathing apparatus.

6) ACCIDENTAL RELEASE MEASURES

Recover the product by damping then sweeping or suction.

To dispose of material, refer to section 13: 'Waste and disposal consideration'.

7) HANDLING AND STORAGE

Handling :

When using do not eat, drink or smoke (S 20/21)

Storage :

Keep out of the reach of children (S 2)

Keep away from food, drink and animal feeding stuffs (S 13)

8) EXPOSURE CONTROLS AND PERSONAL PROTECTION

Extract residual dust at its point of emission.

Wear gloves, goggles, mask with cartridge.

PEL for Dimeturon : 3 mg/m³ (internal to RP)TLV of Cyclanilide : 0.7 mg/m³ (Internal RP)

Revised on : 30/05/00

Appearance	:	SOLID Crystalline powder	White
Melting Range	(°C)	:	189.5 - 190.0
Relative density		:	1.470 (at 20 °C)
Solubility	(g/l)	:	0.048 (Water)
			52.9 (Acetone)
			1.7 (Dichloromethane)
			< 0.001 (Hexane)
n-OCTANOL/WATER partition coefficient (log)	:		3.2

Stable under normal conditions of use
No dangerous reaction known under normal conditions of use.

LD 50 oral route (mg/Kg) : 208 (Female Rat)
LD 50 oral route (mg/Kg) : 315 (Male Rat)
LD 50 Dermal (Rabbit) (mg/Kg) : > 2000
LC 50 inh1 (4h) rat mg/l : > 5.15
Ocular application : Moderately Irritant (Rabbit)
Dermal application : Slightly Irritant (Rabbit)
No sensitizing effect on guinea-pig.
Ames test negative
Known antidote : No specific antidote known. symptomatic treatment.

Toxic to aquatic organisms (R 51)

EC 50 (mg/l)	:	5 (Daphnia)(48h)
LC 50 (mg/l)	:	11 (Rainbow Trout)(96h)

Manufacturer's packaging must be completely empty.
Incineration in a licensed installation, product and contaminated packaging.

```

Proper shipping name : Environmentally hazardous substances, solid, n.o.s.
RID/ADR Class :9          UN num :3077          Label :9          Enumeration :12°C
MARITIME Class :9          UN num :3077          Marine pollutant :No
                                IMDG Page :9029          Label :9
AIR Class :9          UN num :3077          Label :9 Miscellaneous
                                Packing group :III

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Labellings :
As EU Directive : Xn, N R Phrases:22-51/53 6 Phrases :46-60-61
FRANCE : R Phrases: 8 Phrases :
VWD/FAO classification:

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Technical material

THIS INFORMATION CONCERNS ONLY THE PRODUCT CONFORMING TO ITS SPECIFICATION AND LIMITED TO THE USES HEREIN STATED. This sheet complements the technical sheet of use but doesn't replace it. The information contained on this sheet is based on knowledge of the product on the date of publication. It is given in good faith.

. This mark indicates an amendment from the previous version.

SAFETY DATA SHEET

Publication date : 22/01/92

Sheet number: 1034

Revised on : 30/05/00

1) IDENTIFICATION OF THE SUBSTANCE/PREPARATION

Commercial name :

CYCLANILIDE TECHNICAL

Company identification :

AVENTIS CropScience SA
55, avenue René Cassin
69009 LYON
FRANCE

Emergency numbers :

Tél: 04 72 85 25 25 ---- Fax: 04 72 85 27 99

Official advisory body :

ORFILA Téléphone 01 45 42 59 59

2) COMPOSITION / INFORMATION ON INGREDIENTS

GIFAP code : TC

Cyclanilide..... 100 %
- CAS number : 113136-77-9

3) HAZARDS IDENTIFICATION

HAZARDOUS

DANGEROUS FOR THE ENVIRONMENT

Harmful if swallowed (R 22)

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic (R 51/53)

4) FIRST AID MEASURES

After contact with skin, wash immediately with plenty of water (S 28)

In case of contact with eyes, rinse immediately with plenty of water for 20 minutes.

If swallowed, seek medical advice immediately and show this container or label (S 46)

If you feel unwell, seek medical advice (show the label where possible)

5) FIRE-FIGHTING MEASURES

Combustible, danger of toxic gases in smoke :

- Carbon and nitrogen oxides, hydrochloric gas

Avoid the escape of fire-fighting water to the environment.

Recommended fire-fighting media: foam, carbon dioxide, dry powders, waterspray.

Wear self-contained breathing apparatus.

6) ACCIDENTAL RELEASE MEASURES

Recover the product by damping then sweeping or suction.

To dispose of material, refer to section 13: 'Waste and disposal consideration'.

7) HANDLING AND STORAGE

Handling :

When using do not eat, drink or smoke (S 20/21)

Storage :

Keep out of the reach of children (S 2)

Keep away from food, drink and animal feeding stuffs (S 13)

8) EXPOSURE CONTROLS AND PERSONAL PROTECTION

Extract residual dust at its point of emission.

Wear gloves, goggles, mask with cartridge.

PEL for Dimofuron : 3 mg/m³ (internal to RP)TLV of Cyclanilide : 0.7 mg/m³ (internal RP)

Revised on : 30/05/00 .

Appearance	:	SOLID	Crystalline powder	White
Melting Range	(°C)	:	189.5 - 190.0	
Relative density		:	1.470	(at 20 °C)
Solubility	(g/l)	:	0.048	(Water)
			52.9	(Acetone)
			1.7	(Dichloromethane)
			< 0.001	(Hexane)
n-OCTANOL/WATER partition coefficient (log)	:		3.2	

Stable under normal conditions of use
No dangerous reaction known under normal conditions of use.

LD 50 oral route (mg/Kg) : 208 (Female Rat)
LD 50 oral route (mg/Kg) : 315 (Male Rat)
LD 50 Dermal (Rabbit) (mg/Kg) : > 2000
LC 50 inh1 (4h) rat mg/l : > 5.15
Ocular application : Moderately Irritant (Rabbit)
Dermal application : Slightly Irritant (Rabbit)
No sensitizing effect on guinea-pig.
Ames test negative
Known antidote : No specific antidote known, symptomatic treatment.

Toxic to aquatic organisms (R 51)

EC 50 (mg/l)	:	5 (Daphnia)(48h)
LC 50 (mg/l)	:	11 (Rainbow Trout)(96h)

Manufacturer's packaging must be completely empty.
Incineration in a licensed installation, product and contaminated packaging.

```

Proper shipping name : Environmentally hazardous substances, solid, n.o.s.
RID/ADR Class :9          UN num :3077          Label :9          Enumeration :12°C
MARITIME Class :9          UN num :3077          Marine pollutant :No
                                IMDG Page :9029          Label :9
AIR Class :9          UN num :3077          Label :9 Miscellaneous
                                Packaging group :III

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Labellings :
As EU Directive : Xn, N R Phrases:22-51/53 S Phrases :46-60-61
FRANCE : R Phrases: S Phrases :
WHO/FAO classification:

Technical material

THIS INFORMATION CONCERNS ONLY THE PRODUCT CONFORMING TO ITS SPECIFICATION AND LIMITED TO THE USES HEREIN STATED. This sheet complements the technical sheet of use but doesn't replace it. The information contained on this sheet is based on knowledge of the product on the date of publication. It is given in good faith.

. This mark indicates an amendment from the previous version.

SAFETY DATA SHEET

Publication date : 22/01/92

Sheet number: 1034

Revised on : 30/05/00

1) IDENTIFICATION OF THE SUBSTANCE/PREPARATION

Commercial name :

CYCLANILIDE TECHNICAL

Company identification :

- AVENTIS CropScience SA -
55, avenue René Cassin
69009 LYON
FRANCE

Emergency numbers :

Tél: 04 72 85 25 25 ---- Fax: 04 72 85 27 99

Official advisory body :

ORFILA Téléphone 01 43 42 59 59

2) COMPOSITION / INFORMATION ON INGREDIENTS

GIFAP code : TC

Cyclanilide..... 100 %
- CAS number : 113136-77-9

3) HAZARDS IDENTIFICATION -

HARMFUL

DANGEROUS FOR THE ENVIRONMENT

Harmful if swallowed (R 22)

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic (R 51/53)

4) FIRST AID MEASURES

After contact with skin, wash immediately with plenty of water (S 28)

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Combustible, danger of toxic gases in smoke :

- Carbon and nitrogen oxides, hydrochloric gas

Avoid the escape of fire-fighting water to the environment.

Recommended fire-fighting media: foam, carbon dioxide, dry powders, waterspray.

Wear self-contained breathing apparatus.

6) ACCIDENTAL RELEASE MEASURES

Recover the product by damping then sweeping or suction.

To dispose of material, refer to section 13: 'Waste and disposal consideration'.

7) HANDLING AND STORAGE

Handling :

When using do not eat, drink or smoke (S 20/21)

Storage :

Keep out of the reach of children (S 2)

Keep away from food, drink and animal feeding stuffs (S 13)

8) EXPOSURE CONTROLS AND PERSONAL PROTECTION

Extract residual dust at its point of emission.

Wear gloves, goggles, mask with cartridge.

PEL for Dimeturon : 3 mg/m³ (internal to RP)TLV of Cyclanilide : 0.7 mg/m³ (internal RP)

Revised on : 30/05/00

Appearance	:	SOLID	Crystalline powder	White
Melting Range	(°C)	:	189.5 - 190.0	
Relative density	:	:	1.470	(at 20 °C)
Solubility	(g/l)	:	0.048	(Water)
			52.9	(Acetone)
			1.7	(Dichloromethane)
			< 0.001	(Hexane)
n-OCTANOL/WATER partition coefficient (log)	:	:	3.2	

Stable under normal conditions of use
No dangerous reaction known under normal conditions of use.

LD 50 oral route (mg/Kg) : 200 (Female Rat)
LD 50 oral route (mg/Kg) : 315 (Male Rat)
LD 50 Dermal (Rabbit) (mg/Kg) : > 2000
LC 50 Inhal (4h) rat mg/l : > 5.15
Ocular application : Moderately Irritant (Rabbit)
Dermal application : Slightly Irritant (Rabbit)
No sensitizing effect on guinea-pig.
Anest test negative
Known antidote : No specific antidote known, symptomatic treatment.

Toxic to aquatic organisms (R 51)
EC 50 (mg/l) : 5 (Daphnia)(48h)
LC 50 (mg/l) : 11 (Rainbow Trout)(96h)

Incineration in a licensed installation, product and contaminated packaging.

```

Proper shipping name : Environmentally hazardous substances, solid, n.o.s.
RID/ADR Class :9          UN num :3077          Label :9          Enumeration :12°C
MARITIME Class :9          UN num :3077          Marine pollutant :No
                                IMDG Page :9029          Label :9
AIR Class :9          UN num :3077          Label :9 Miscellaneous
                                Packaging group :III

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Labellings :
As EU Directive : Xn, N R Phrases:22-51/53 S Phrases :46-60-61
FRANCE : R Phrases: S Phrases :
WHO/FAO classification:

Technical material

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- This mark indicates an amendment from the previous version.

~~Aventis-CropScience~~



DATE: 5/7/01

TO: LISA

NUMBER OF FAXED SHEETS 3
Including Cover Sheet
FAX 870-572-3795

PHONE _____

FROM: Fred Snider _____

FAX: 919-549-9724

PHONE: 919-549-2469

NOTES: LISA

This is a old MSDS From
when we where Rhone PoLenc.
It is still good. The product
is Not Regulated.

SAFETY DATA SHEET

Publication date : 22/01/02

Sheet number : 1034

Revised on : 24/01/02

1) IDENTIFICATION OF THE SUBSTANCE/ PREPARATION

Commercial name :

CYCLANILIDE

Company identification :

Rhône-Poulenc Agrochimie

14-20, rue Pierre Salzet

69600 LYON

FRANCE

Emergency numbers :

Telephone : (33)72.20.25.25 Fax : (33)72.20.27.00

ORFILA number :

(33) 1-65.42.99.99

2) COMPOSITION / INFORMATION ON INGREDIENTS

Cyclanilide..... 100 %

GHS code : 10

3) HAZARDS IDENTIFICATION**HAZARD**

Harmful if swallowed (H 302)

Irritating to eyes (H 361)

4) FIRST AID MEASURES

After contact with skin, wash immediately with plenty of water (S 701)

In case of contact with eyes, rinse immediately with plenty of water for 20 minutes.

If swallowed, seek medical advice immediately and show this container or label (S 601)

If you feel unwell, seek medical advice (show the label where possible)

5) FIRE-FIGHTING MEASURES

Combustible, danger of toxic gases in smoke :

- Carbon and nitrogen oxides, chlorohydrolic gas

Avoid the escape of fire-fighting water to the environment.

Recommended fire-fighting media: foam, carbon dioxide, dry powders, spray water.

Use a self-contained breathing apparatus.

6) ACCIDENTAL RELEASE MEASURES

Recover the product by dumping then occupying or suction.

To dispose of material, refer to section 13: 'Waste and disposal consideration'.

7) HANDLING AND STORAGE**Handling**

When using do not eat, drink or smoke (S 20/21)

Storage

Keep out of reach of children (S 7)

Keep away from food, drink and animal feeding stuffs (S 13)

8) EXPOSURE CONTROLS AND PERSONAL PROTECTION

Extract residual dust at its point of emission.

Wear gloves, goggles, mask with cartridge.

Publication date : 12/01/92	Sheet number: 1034	Revised on : 24/03/92
9) PHYSICAL AND CHEMICAL PROPERTIES		
Appearance : Solid Crystalline powder white Melting Range (°C) : 189.5 - 190.0		
10) STABILITY AND REACTIVITY		
Stable under normal conditions of use No dangerous reaction known under normal conditions of use.		
11) TOXICOLOGICAL INFORMATION		
LD 50 oral route (mg/Kg) : 200 (Female Rat) LD 50 oral route (mg/Kg) : 315 (Male Rat) DL 50 Dermal (Rabbit) (mg/Kg) : > 2000 Ocular application : Irritant (Rabbit) Dermal application : Slightly Irritant (Rabbit) No constituting effect on guinea-pig. Ames test : negative Known antidote : No specific antidote known, symptomatic treatment.		
12) ECOLOGICAL INFORMATION		
Toxic to aquatic organisms (R 51) LC 50 (mg/l) : 11 (Rainbow Trout) (48h) EC 50 (mg/l) : 5 (Daphnia) (48h)		
13) DISPOSAL CONSIDERATIONS		
Manufacturer's packaging must be completely empty. Incineration in a licensed installation, product and container packaging.		
14) TRANSPORT INFORMATION		
RID/ADR Not regulated MARITIME Not regulated AIR Not regulated		
15) REGULATORY INFORMATIONS		
EU labelling : Xn R Phrases: 22-36 FRANCE labelling : R Phrases: WHO classification : R Phrases : 2-13-20/21-43 C Phrases :		
16) OTHER INFORMATIONS		
Technical material		
THIS INFORMATION CONCERNS ONLY THE PRODUCT CONFORMING TO ITS SPECIFICATION AND LIMITED TO THE USES HEREIN STATED. This sheet complements the technical sheet of use but doesn't replace it. The informations contained on this sheet are based on knowledge of the product on the date of publication. They are given in good faith.		

Assumptions:

1. Average Rate @ 65% Overall O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=1.25 hours @ 300 lb./plow
5. Vac. Dryer discharge at 0.5% LOD
6. All Yield calculations based on DCA
7. —
8. —
9. —
10. —

Limiting Cycle Time:	16.5 hours
Instantaneous Rate	
Final Product lb/bx:	3,143 lb
Final Product lb/day:	4,562 lb/day
Final Product MT/day:	2.1 MT/day
Average Rate @ 65% OAOST	
Final Product lb/bx:	2,043 lb
Final Product lb/day:	2,965 lb/day
Final Product MT/day:	1.3 MT/day

Stream No.		R-4 Charge	CPDM Charge	NaOCH3 Charge	MeOH Strip	Coupling Water Charge	Intermed Xferred to R-1	Hydroly's Water Charge	R-1 Hydr. Intermediate	MeOH Distillat'n	Intermed. Xferred to R-3 (AQ)	Hydrol. Org. Phase to Rec'y
Component	MW											
Raw Materials												
CPDM	158.10		2,146.8									
2,4 DCA	162.02	2,200.0										
NaOCH3	54.02			670.8								
MeOH	32.00			1,565.1								
H2O	18.00					6,222.7	6,222.7	2,921.3	9,144.0		9,144.0	
NaOH	40.00											
Formic Acid	46.03											
Xylene	106.17	7,982.8			23.8		7,959.0		7,959.0			7,959.0
(By) Products												
Na-CPMPA	310.10						4,000.2					
MeOH	32.00				2,359.8				412.8	412.8		
Na-RPA 90946	296.10								3,628.6		3,628.6	
RPA 90946	274.10											
NaCHO2	68.01											
Others	—											
Stream Weight, lb/batch		10,182.8	2,146.8	2,235.9	2,383.8	6,222.7	18,181.8	2,921.3	21,144.4	412.8	12,772.6	7,959.0
Stream Volume, gal (ft3)		1,313.0	224.7	223.7	361.2	747.0	2,352.7	350.7	2,762.5	62.6	1,580.7	1,099.5
Temperature, °F		77.0	104.0	140.0	146.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0
Pressure, psia (torr)		14.7	(180)	(180)	(180)	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.93	1.15	1.20	0.79	1.00	0.93	1.00	0.92	0.79	0.97	0.87
Viscosity, cP (cSt)												
Molar Yield (Overall)							95.0%		95.0%			
Vessel Nominal Volume, gal (ft3):		2,870.0	2,870.0	2,870.0			2,870.0		3,500.0		3,000.0	17,000.0
Vessel Filled Level (%):		46%	54%	61%			82%		78.9%		53%	6%

Print Date: 8/17/00

File: c:\...cyanilide 90946\90946 MASS BAL whole drum chg.xls

Page 1 of 4

DCG
Filetab: MB w Yield

AB0000060666

Aventis Cyclanilide in Unit 5—2,
Heat & Mass Balance

Assumptions:

1. Average Rate @ 65% Overall O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=1.25 hours @ 300 lb./pl
5. Vac. Dryer discharge at 0.5% LOD

Stream No.												
Description		R-3 Acid Charge	Precipit'd Prod't to Centrif.	Centrif. Wash Water	M/L Disch. To T-5208	Centrif'd Mat'l to Holoflgt	Holoflgt Dryer Disch	Holoflgt Vent Disch	Wet Prod't to Dryer	Vac Dryer Vent Disch	Dried Final Product	Xylene to Recycle
Component	MW											
Raw Materials												
CPDM	158.10											
2,4 DCA	162.02											
NaOCH ₃	54.02											
MeOH	32.00											
H ₂ O	18.00	100.9	9,144.0	6,030.7	14,380.9	793.8	785.8	7.9	785.8	770.1	15.7	1.2
NaOH	40.00											
Formic Acid	46.03	571.6										
Xylene	106.17											7,959.0
(By) Products												
Na-CPMPA	310.10											
MeOH	32.00											
Na-RPA 90946	296.10											
RPA 90946	274.10		3,191.1			3,175.1	3,143.3		3,143.3		3,127.6	
NaCHO ₂	68.01		844.4		844.4							
Others	---											158.8
Stream Weight, lb/batch		672.4	13,179.5	6,030.7	15,225.4	3,968.9	3,929.2	7.9	3,929.2	770.1	3,143.3	8,118.9
Stream Volume, gal (ft ³)		68.4	1,631.1	724.0	1,740.7	453.8	449.2	0.9	{105.11}	92.5	{126.14}	1,124.6
Temperature, °F		77.0	68.0	68.0	68.0	68.0	68.0	68.0	212.0	212.0	212.0	68.0
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft ³)		1.18	0.97	1.00	1.05	1.05	1.05	1.05	{37.4}	{1.00}	{24.9}	0.87
Viscosity, cP (cSt)												
Molar Yield (Overall)			95.0%								{85.7%}	
Vessel Nominal Volume, gal (ft ³):			4,000.0	4,000.0	30,000.0				{240.0}	500.0	{240.0}	4,000.0
Vessel Filled Level (%):			41%	18%	6%				44%	18%	—	51%



Internal Correspondence

To: Peter Fields
CC: C. McGee, J. Rone
From: David C. Guffey
Date: 17 December 1999
RE: Cyclanilide 90946 Project—Projected Waste Costs **REVISED**

Please be advised that we are currently investigating a new project for Rhone-Poulenc Agro, Cyclanilide 90946, with a projected startup of mid next year. Following are the preliminary worst-case waste figures based on a 15 hour cycle time with a 3,900 lb/batch (2Trains) payload:

Organic Waste:

<u>Component</u>	<u>Daily Prod'n (lb/day)</u>	<u>% of Stream</u>	<u>Est. Volume (gal/day)</u>
Water	16.6	0.3	2.0
Toluene	1,917.8	33.2	264.6
Methanol	3,459.2	59.8	525.7
Others (Heavies)	389.4	6.7	Solid in Sol'n

Aqueous Waste (Case I).

<u>Component</u>	<u>Daily Prod'n (lb/day)</u>	<u>% of Stream</u>	<u>Est. Volume (gal/day)</u>
Water	2,210.7	57.0	2555.8
Sodium Formate	1,667.7	43.0	Solid in Sol'n

Aqueous Waste (Case II):

<u>Component</u>	<u>Daily Prod'n (lb/day)</u>	<u>% of Stream</u>	<u>Est. Volume (gal/day)</u>
Water	12,965.1	88.6	2555.8
Sodium Formate	1,667.7	11.4	Solid in Sol'n

Please estimate waste costs on a *per lb.* basis for this project and disposal options—*i.e. transfer to ponds, incineration, landfill, etc.*).

Assumptions:

1. Average Rate @ 65% Overall O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=1.25 hours @ 300 lb./pl
5. Vac. Dryer discharge at 0.5% LOD

Stream No.													
Description		Recycled Xylene	Water to Recycle	Forerun Cut to Org Waste	Recycled Water	Organic Waste	Salt Waste						
Component	MW												
Raw Materials													
CPDM	158.10												
2,4 DCA	162.02												
NaOCH ₃	54.02												
MeOH	32.00			25.0		25.0							
H ₂ O	18.00		15,166.8	200.0	14,993.8	1.2	173.0						
NaOH	40.00		1,136.8										
Formic Acid	46.03												
Xylene	106.17	6,337.2		30.0		1,621.8							
(By) Products													
Na-CPMPA	310.10												
MeOH	32.00					2,772.6							
Na-RPA 90946	296.10												
RPA 90946	274.10												
NaCHO ₂	68.01		844.4				844.4						
Others	---					158.8							
Stream Weight, lb/batch		6,337.2	17,148.0	255.0	14,993.8	4,579.3	1,017.4						
Stream Volume, gal (ft³)		877.8	1,906.1	38.3	1,800.0	671.0	(14.20)						
Temperature, °F		75.0	68.0	68.0	68.0	68.0	68.0						
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7						
Density, g/cc (lb/ft³)		(0.87)	1.08	0.80	1.00	0.82	(71.65)						
Viscosity, cP (cSt)													
Molar Yield (Overall)													
Vessel Nominal Volume, gal (ft³):			9,000.0			5,000.0	(27.0)						
Vessel Filled Level (%):			21%			13%	53%						

Aventis Cyclanilide in Unit 5—2,4-DCA Whole Drum Charge

Cycle Time Analysis

Step Cycle
Time

Vessel Cycle
Time

Rate Limiting
Vessel Time
16.5 hours

Coupling Reaction (R-5104)	Press/Vac Test	1.0
	Charge DCA	<u>0.8</u>
	Charge Xylene	<u>0.9</u>
	Heat to 40°C	0.5
	Charge CPDM	<u>0.8</u>
	Draw Vacuum	0.3
	Heat to 60°C	0.8
	Charge Na Methoxide	2.5
	Distill MeOH/Xylene	<u>1.9</u>
	Charge Water	<u>0.6</u>
	Stir/Settle	1.5
	Transfer to Hydrolysis Rxtr	<u>1.0</u>

Σ = 12.6

Hydrolysis Reaction (R-5101)	Charge Water	<u>0.4</u>
	Draw Vacuum	0.7
	Heat/Reflux	3.0
	Distill MeOH	3.0
	Phase Separate / Transfer	2.0

Σ = 9.0

Precipitation (R-5103)	Charge Formic Acid	1.5
	Mix	1.0
	Sample/Results	0.8
	Transfer	<u>1.4</u>

Σ = 6.0

Isolation (V-5312, CF-5701, D-5700)	Centrifuge Batch	<u>16.5</u>
--	------------------	-------------

Σ = 16.5 (240 lb/hr)

Drying/Packaging (D-7100)	Charge <u>2</u> batches	2.0
	Dry Batch	18.0
	Packout	2.0

Σ = 11.0 (allocated time/batch)

Total Time for Batch: 55.2 hours
(Charge to Packout)

Notes:

nn.n indicates calculated value,
otherwise value is estimated

Aventis

**Memorandum of Understanding - Cyclanilide
Dated September 1, 2000**

Aventis CropScience



CEDAR
Mr Geoffrey L. PRATT
5100 Poplar Ave.
Suite 2414
Memphis, TN 38137
UNITED STATES

September 1, 2000

Réf : fb/SR 108.00

CONFIDENTIAL


SUBJECT : MoU OF CYCLANILIDE

Dear Geoffrey,

Please find enclosed two originals of the MoU which have been signed by Hans Moser on behalf of Aventis CropScience.

Thank you for your cooperation.

Best Regards.

P/o 
Serge RAVET
Toll manufacturing manager

MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING is made and entered into as of the date last below written (the "Effective Date"), by and between

Cedar Chemical Corporation, a Delaware corporation, having its principal place of business at Suite 2414 Clark Tower, 5100 Poplar Avenue, Memphis, Tennessee 38137 (hereinafter referred to as "CEDAR"),

and

Aventis CropScience Matières Actives, a French "société en nom collectif" having its registered office at 14/20, rue Pierre Baizet, 69009 LYON, France (hereinafter referred to as "Aventis").

Witnesseth:

- ◆ WHEREAS, Aventis desires to retain an independent third party contractor to toll manufacture for it Cyclanilide (1-(2,4-dichlorophenyliminocarbonyl)-cyclopropane carboxylic acid) (hereinafter "Product") from 2,4 DCA (2,4 Dichloro aniline) (hereinafter "DCA") and (cyclopropane- 1,1-dicarboxylic acid dimethyl ether (CPDM) (hereinafter "CPDM"), DCA and CPDM together with Sodium Methoxide (hereinafter "NaMO") being sometimes referred collectively herein as the "Raw Materials"; and
- ◆ WHEREAS, CEDAR owns and operates a chemical manufacturing facility located at West Helena, Arkansas which, following installation of certain capital improvements and equipment (the "Capital Improvements"), is deemed capable of producing Product from DCA and CPDM utilizing Aventis' manufacturing process (the "Process") disclosed by Aventis to Cedar pursuant to a Secrecy Agreement between Aventis and Cedar dated as of May 14, 1999 (the "Secrecy Agreement"); and processes disclosed to Cedar pursuant to a Secrecy Agreement between Aventis and Cedar dated as of November 22, 1999 (the "Degussa Secrecy Agreement").
- ◆ WHEREAS, it is agreed that CEDAR and Aventis shall promptly commence negotiations with each other in good faith with the intent of reaching an agreement (the "Agreement") satisfactory in form and substance to their respective managements and incorporating the terms and principles set forth herein.

NOW, THEREFORE, in consideration of the premises and the terms and conditions herein contained, the Parties agree as follows:

Article 1 - Purpose. The purpose of this Memorandum of Understanding is to set forth the terms and principles under which the parties will negotiate in good faith with the objective of entering into a toll manufacturing and supply Agreement whereby Cedar will produce Product for Aventis, and under which Cedar will initiate engineering studies and make equipment purchase commitments to enable it to construct and complete the Capital Improvements in time to begin producing Product for Aventis in the fourth quarter of the year 2000 in the quantities and in accordance with the terms and conditions set forth herein.

Article 2 - Agreement. The parties intend to negotiate in good faith with the objective of entering into an Agreement which will include among other terms, the following provisions:

A. **Term.** The initial term (the "Initial Term") shall be from the date of execution of the Agreement through December 31, 2006. Thereafter, the term of the Agreement shall be renewed for successive two year periods unless terminated by either party upon notice to the other not less than one (1) year prior to the end of the Initial Term or one year prior to the end of any extension of the Initial Term of Agreement; provided that the Agreement shall not be so extended unless, prior to the end of the Initial Term or of any extended term, the parties will have negotiated and reached mutual agreement in respect of the terms of such extension (including the price and quantity).

B. **Raw Materials.** Aventis shall be responsible for supplying Cedar, at its cost, the Raw Materials in sufficient quantities to enable Cedar to produce, in campaigns scheduled in accordance with the provisions of Article 2D, all quantities of Product ordered by Aventis, provided that in the event Cedar is able to obtain a more favorable price than Aventis for purchase of NaMO, following prior approval from Aventis, Cedar shall purchase such quantities of NaMO as shall be required for it to perform hereunder, but for the account of Aventis. Cedar shall supply, at its cost, all raw materials other than the Raw Materials and Aventis shall reimburse Cedar its actual cost for the purchase of such raw materials within thirty (30) days following the date of Cedar's invoice, provided that Cedar shall in all cases employ a reasonable competitive purchasing process. Cedar shall reimburse Aventis for all of Aventis' costs in supplying Raw Materials to Cedar, if such Raw Materials are used by Cedar to produce Product, which due to Cedar's negligence or failure to follow Aventis' process, does not meet the specifications set forth in Appendix A.

C. **Product.** Aventis shall order and Cedar shall produce from Raw Materials supplied by Aventis not less than seven hundred ninety (790) metric tons of Product during the Initial Term of the Agreement. For indicative purposes, Aventis' current estimate of its yearly requirements for the Product is one hundred fifty (150) metric tons per year, provided that such figure is provided for information purposes only and will not be binding.

Aventis shall order and purchase eighty (80) metric tons of Product from Cedar by December 31, 2000, and shall order and purchase one hundred fifty (150) metric tons of Product from Cedar by December 31, 2001.

In the event Aventis shall not have ordered and purchased from Cedar pursuant to the Agreement, at least one hundred and twelve (112) metric tons of Product during 2002 and in each calendar year of the Initial Term thereafter, then Aventis shall pay an amount equal to \$8.00 multiplied by the difference between the amount of Product ordered and purchased and one hundred and twelve (112) metric tons, provided however, that any such amounts paid by Aventis will be credited as a prepayment for any Product to be delivered in the following calendar year of the Initial Term in excess of one hundred and twelve (112) metric tons.

If during 2002 or any calendar year of the Initial Term thereafter, Aventis orders and purchases an amount of Product which exceeds one hundred and twelve (112) metric tons, such excess shall be credited towards, and shall thereby reduce, Aventis' commitment in respect of the one hundred and twelve (112) metric tons of Product for the following calendar year of the Initial Term, provided that the credit will be limited to twenty-eight (28) metric tons.

D. **Scheduling.** Aventis shall submit its good faith estimate of its orders for Product to be produced by Cedar in each calendar year during the term of the Agreement by no later than July 1 of the previous calendar year, provided that such estimate will be for the purpose of facilitating scheduling of manufacture only and will not be binding, provided that a firm order will be issued by Aventis by October 31 of such year, which order shall specify the delivery date(s) for the Product.

E. **Raw Material Usage.** Maximum usage factors applicable to consumption of Raw Materials (expressed in kilograms of Raw Materials consumed per kilogram of Product) shall be determined based on actual results achieved during the first industrial production of Product by Cedar. Thereafter, any over-consumption of Raw Materials (of more than 3.5%) shall be for Cedar's account. The savings on any under-consumption of Raw Materials of more than 3.5% shall be shared equally by the parties.

F. **Capital Improvements.** Cedar's cost of Capital Improvements shall be amortized over the first seven hundred ninety (790) metric tons of Product to be produced by Cedar and paid for by Aventis during the Initial Term of the Agreement. For example, if the agreed cost of the Capital Improvements for which Aventis shall be responsible is \$750,000.00, \$ 0.95 for each kilogram of Product purchased by Aventis from Cedar hereunder shall be credited to Aventis' obligation to reimburse Cedar's cost of Capital Improvements. If Cedar has not been totally reimbursed for the agreed cost of the Capital Improvements by December 31, 2006, Aventis shall be responsible for reimbursing Cedar the balance of its costs of Capital Improvements set forth in Appendix B by December 31, 2006.

G. **Startup.** Aventis shall provide reasonable technical assistance to Cedar during startup of the initial campaign.

H. **Waste Disposal.** The parties shall cooperate to determine the most cost effective and environmentally sound method to dispose of wastes generated by production of Product. Costs of waste disposal shall be for Aventis' account, provided that the cost of the waste disposal charge to Aventis shall not exceed \$ 1.25 per kilogram of Product.

I. **Toll Fees.** Cedar's toll manufacturing fee for production of Product for Aventis during the Initial Term shall be \$8.00 per kilogram for all Product ordered for production. The fee set forth above includes all amounts relating to the depreciation of the Capital Improvements referred to in Article 2F above). Commencing with the calendar year 2002, and each calendar year thereafter, the fees set forth above may be adjusted, to reflect increases in manufacturing costs according to the escalation formula set forth in Appendix C hereto.

Cedar shall invoice Aventis at the end of each month during the term of the Agreement for all quantities of Product delivered during such month, which deliveries shall be Ex works, at the applicable toll manufacturing fee, and for all raw materials (including NaMO) purchased by Cedar hereunder. Such invoices shall be due and payable by Aventis thirty (30) days from date of invoice.

J. **Miscellaneous.** The Agreement shall contain additional terms and provisions normally contained in agreements of this nature.

Article 3 - Schedule of Target Dates.

A. The detailed engineering drawings describing the Capital Improvements, and Cedar's final cost to install the Capital Improvements to be amortized over the Initial Term of Agreement are attached as Appendix B. Appendix B includes a schedule of the costs incurred and to be incurred by Cedar while negotiation of the Agreement is pending. All such costs and contractual commitments incurred by Cedar as set out in such schedule of costs shall be for Aventis' account, either for amortization and reimbursement in accordance with the provisions of Article 2F hereinabove, or, alternatively, in the event that, following good faith negotiations, the Agreement is not executed by the parties on or before December 31, 2000, or, if the Agreement is executed by the parties, but is subsequently terminated for reasons other than for default by Cedar prior to the end of the Initial Term, such costs (to the extent incurred by Cedar and unamortized) shall be paid in full by Aventis to Cedar upon the occurrence of any such event.

B. The Product and Raw Material specifications are attached as Appendix A. The Appendices hereto will be used as Exhibits to the Agreement.

C. On or before September 30, 2000, Aventis shall prepare and deliver to Cedar a proposed first draft of the Agreement.

D. The parties will work together with the objective of submitting a final draft of the Agreement to their respective managements for approval on or before October 31, 2000.

Article 4 - Nature of Agreement. The provisions of this Memorandum of Understanding are intended by the parties to be binding. This Memorandum of Understanding shall become effective on the Effective Date and remain valid until the earlier of the signature of the Agreement or December 31, 2000.

Article 5 - Confidentiality. The parties hereby agree that any information exchanged pursuant hereto shall be subject to the provisions of the Secrecy Agreement and shall be considered "Confidential Information" as such term is defined in the Secrecy Agreement, provided that: (i) the parties hereby agree to extend the term of the Secrecy Agreement until December 31, 2000 and (ii) any information exchanged pursuant hereto which would constitute Degussa-Huls Confidential Information as such term is defined in the Degussa Secrecy Agreement, shall be subject to the Degussa Secrecy Agreement.

Article 6 - Dispute Resolution, Applicable Law. All disputes arising in connection with the present Memorandum of Understanding shall be finally settled under the rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules.

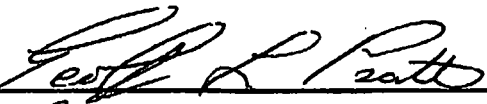
The arbitration shall be conducted in the English language in New York City.

This Memorandum of Understanding shall be construed in accordance with and governed by the laws of the State of New York.

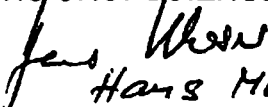
Article 7 - General. The terms of this Memorandum of Understanding may only be amended, modified or waived by a separate document in writing which has been signed by both parties. This Memorandum of Understanding supersedes any prior written or oral agreements or understandings between the parties with respect to the subject matter hereof and may be executed in counterparts, each of which shall constitute an original and all of which, when construed together, shall constitute the same instrument. Unless otherwise expressly agreed by the parties, neither party may transfer or assign this Agreement to any third party without the prior written consent of the other party.

Executed by the parties, acting by and through their authorized representatives, as of the dates appearing below.

CEDAR CHEMICAL CORPORATION

By: 
Name: GEOFFREY L PRATT
Title: VICE PRESIDENT SPECIALTY CHEMICALS
Date: August 9, 2000

AVENTIS CROPS SCIENCE MATIÈRES ACTIVES

By: 
Name: HANS MOSER
Title: Head Global Strategy
Date: 31. 08. 2000

Appendix A: Product and Raw Material Specifications

Appendix B: Capital Expenditures

Appendix C: Escalation Formula

APPENDIX A 1/4 : Product and Raw Material Specifications

Cyclanilide Specifications

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications (g/Kg)	Frequency
• Appearance	Visual	White to yellowish flowing powder	each batch
• CYCLANILIDE content	C.817.06.95	960 min.	each batch
• Water	CIPAC MT 30.1	5 max.	each batch
• Xylène	C.816.06.95	1 max.	each batch
Process Impurities :			
- RPA 116741 (imp.A)	C.821.07.95	3 max.	each batch
- 2,4 dichloroaniline	C.821.07.95	1 max.	each batch
- RPA 090945	C.821.07.95	10 max.	each batch
- RPA 111030	C.821.07.95	10 max.	each batch
- RPA 114924	C.821.07.95	15 max.	each batch
- RPA 093903	C.821.07.95	1 max.	each batch
- RPA 090899	C.821.07.95	1 max.	each batch

Cross contamination prevention :

All possible impurities from the implementation of an other production in the equipment involved in manufacturing of Cyclanilide, must be identified and quantified.

2. PACKAGING

- Polyéthylène drums : 120 l.
- Net weight : 50 Kg of Cyclanilide



APPENDIX A 2/4 : Product and Raw Material Specifications

2,4 Di Chloraniline Specifications (For Cyclanilide)

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications (g/Kg)	Frequency
• Appearance	Visual	Molten product colourless to brown	each batch
• Solidification point		60° C min.	each batch
• Purity	Gas chromatography	990 min.	each batch
• Water	Karl Fischer	1 max.	each batch
Process Impurities			
- 2,5 Di chloraniline	Gas chrom.	2 max.	each batch
- 2,6 Di chloraniline	Gas chrom.	1 max.	each batch
- 3,4 Di chloraniline	Gas chrom.	1 max.	each batch
- Others impurities (sum)	Gas chrom.	3 max. (1 max for each)	each batch
- Chlorides		100 ppm max.	

2. PACKAGING

- Steel drum for liquid product.

APPENDIX A 3/4 : Product and Raw Material Specifications

CDM Specifications

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications
• Purity	GC / MS	min. 97,50 %
• Dimethylmalonate	GC / MS	max. 1,00 %
• Dimethylformamide	GC / MS	max. 0,75 %

fl

APPENDIX A 4/4 : Product and Raw Material Specifications

Sodium Methylete Specifications Solution 30 % in Methanol

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications
<ul style="list-style-type: none">• Total alkalinity calculated as : NaOCH₃ NaOCH₃ content	Titration	29,5 % - 31,0 % 29,5 % - 30,5 %
<ul style="list-style-type: none">• Na₂CO₃ + NaOH content	Titration	Max 0,5 %
<ul style="list-style-type: none">• Color	ISO 6271	Max 30 APHA

46.

APPENDIX B 1/1 : Capital Expenditures

Cost Estimate Summary : Cyclanilide Campaign

	Labor	Material	Total
• 1.0 Site work			
Subtotal	\$ 8 400,00	\$ 1 000,00	\$ 9 400,00
• 2.0 Civil			
Subtotal	\$ 23 275,00	\$ 11 500,00	\$ 34 775,00
• 3.0 Reactors (Colled/ Jacketed)			
Subtotal	\$ 25 550,00	\$ 27 600,00	\$ 53 150,00
• 4.0 Vessels/Tanks			
Subtotal	\$ 5 600,00	\$ 10 000,00	\$ 15 600,00
• 5.0 Heat exchangers			
Subtotal	\$ 1 750,00	\$ 18 000,00	\$ 19 750,00
• 6.0 Rotating Equipment			
Subtotal	\$ 6 300,00	\$ 31 000,00	\$ 37 300,00
• 7.0 Filtering Equipment			
Subtotal	\$ 700,00	\$ 6 000,00	\$ 6 700,00
• 8.0 Piping			
Subtotal	\$ 107 940,00	\$ 91 917,50	\$ 199 857,50
• 9.0 Electric/ Instrumentation			
Subtotal	\$ 104 860,00	\$ 158 750,00	\$ 263 610,00
• 10.0 Inspection/ Engineering			
Subtotal	\$ 35 000,00	\$ 0,00	\$ 35 000,00
• 11.0 Rentals & 12.0 Miscellaneous			
Subtotal	\$ 840,00	\$ 6 500,00	\$ 7 340,00
SUBTOTAL	\$ 320 215,00	\$ 362 267,50	\$ 682 482,50
Contingency (10 %)	\$ 32 021,50	\$ 36 226,75	\$ 68 248,25

APPENDIX C 1/1 : Fee Escalation Formula

Application commencing in 2002

$$P_{n+1} = P_n \left[0,15 + 0,425 \frac{W_{n+1}}{W_n} + 0,425 \frac{PPI_{n+1}}{PPI_n} \right]$$

- P_{n+1} = Adjusted toll fee for the contract year in \$ / Kg of Cyclanilide.
- P_n = Toll fee of the previous contract year in \$ / Kg of Cyclanilide
- W_{n+1} = Employment Cost Index published by the US Bureau of Labor Statistic available the month of december preceding the date of adjustment.
- W_n = Employment Cost Index of the previous contract year.
- PPI_{n+1} = Producer Price Index, for the available month of december preceding the date of adjustment :
 - Industry and Product : Industrial Organic Chemical, Code 296.
 - Subcategory : Agricultural Chemical, nbc, other pesticidal preparations primarily for agricultural, Code 2879 – 8.
- PPI_n = Producer Price Index of the previous contract year.

fl.

M. Garner

From: Dan.Stahl@aventis.com

Sent: Friday, September 01, 2000 8:23 AM

To: mgarner@cvrtmail.com

Cc: Serge.Ravet@aventis.com; Dave.Linhardt@aventis.com

Subject: PPI Index

Hi Melissa-

I don't think we've met yet but I am part of the same Aventis Global Sourcing Team Serge Ravet belongs to, however I'm located here in the US. I will be supporting Cedar and Serge in our implementation of the cyclanilide manufacturing.

Serge asked me to forward on to you the PPI Index information for the MOU. The Industrial Organic Chemicals is number 286 I believe you may have thought it was 296. 2879-8 is a valid code number that we found in hardcopy of the PPI Detailed Report. If you are doing your searching via the Internet, the Dept of Labor site can be difficult. Unless all the magic "symbols and spaces" are included in the query, the report may not print. Let me know if you would like me to obtain the data and we can fax to appropriate persons.

We also need your labor index. Thanks for your help, I'm sure we'll be in touch!

Dan Stahl

Aventis Global Sourcing

Phone: 919.549.2195

Fax: 919.549.2003

E-mail: Dan.Stahl@aventis.com



August 10, 2000

Serge Ravet
Toll Manufacturing Manager
Aventis Crop Science
14-20 rue Pierre Baizet - B.P. 9163 F-69263
Lyon Cedex 09
France

Dear Serge,

Enclosed are the three originals of the MOU which have been signed on behalf of Cedar. You will send us an original when Hans has signed for Aventis.

This will end my formal tour of duty on the project and you should contact Chris McGee regarding the Agreement which I believe you will draft. I will be available for comment and clarification as the Agreement proceeds, should that be necessary.

Regards,

A handwritten signature in black ink, appearing to read "Geoffrey Pratt", is written over a horizontal line.

Geoffrey Pratt

Cc: Chris McGee

Aventis CropScience



**CEDAR
Mr Geoffrey L. PRATT
5100 Poplar Ave.
Suite 2414
Memphis, TN 38 137
UNITED STATES**

3 August, 2000

Réf : fb/SR 106.00

CONFIDENTIAL

Subject : Cyclanilide MoU

Dear Geoffrey,

You will find herewith three copies for signature of the Cyclanilide MoU we agreed on.

While you will send them back , Hans Moser will be in the office to sign them on behalf of A.C.S.

Best Regards.

A handwritten signature in black ink, appearing to read "Serge Ravet", with several horizontal lines drawn underneath it.

**Serge RAVET
Toll Manufacturing Manager**

Vendor Number	Supplier	Item and Item Number	Terms Net
22195	PPG	ODCB 41000	60
		DCPI 40150	30
30160	UNION CARBIDE	ALL PRODUCTS	60
24804	RHONE POULENC	ALL PRODUCTS	90
26599	SOLUTIA	ODCB 41000	45
14015	CELANESE	ALL PRODUCTS	60
21760	NORTH HUNGARIAN	ALL PRODUCTS	90
09840	EL DORADO CHEMICAL	ALL PRODUCTS	60
27400	STEPAN COMPANY	ALL PRODUCTS	90
12796	GREIF BROS.	ALL PRODUCTS	60
06955	CONE SOLVENTS	ALL PRODUCTS	60
19520	METACHEM	ODCB 41000	60
00476	A H MARKS & CO. LIMIT	ALL PRODUCTS	90
09640	EASTMAN CHEMICAL	ALL PRODUCTS	60
00560	AIR PRODUCTS	ALL PRODUCTS	30
30585	VAN LEER CONTAINERS	ALL PRODUCTS	60
18360	MARMAN USA	ALL PRODUCTS	45
00270	ACETO CHEMICAL	ISOPHORONE 40500	120
		NITROMETHANE 42680	60
00620	CHEMTECH	ALL PRODUCTS	60
14455	IDEAL CHEMICAL	50% SODIUM HYDROXIDE 41530	90
		ALL OTHER PRODUCTS	60
23505	PRAXAIR	ALL PRODUCTS	30
07000	CONSOLIDATED PIPE	ALL PRODUCTS	30
16435	JOHNSON MATTHEY INC	1% PLATINUM ON THE CARBON	30
		PLATINUM METAL	2

Revisions in bold

ODCB FORECAST

Company	real supply share	expected production	Communicated supply share	Communicated production plan	ODCB Demand
PPG	45	11300	50	10170	5746.05
SOI	35	11300	50	7910	4469.15
Meta	20	11300	30	7533.333333	2553.8

12769

3.5mm / Jan, Feb, Mar

8.5mm / 9mo

1ST QUARTER — 3.5mm

2ND QUARTER — SLOW

3RD QUARTER — MODERATE

4TH QUARTER — MODERATE

Hoped

11,700 h # DCA

Comm.

7,900 h # DCA

YTD Sept

2,800 h # DCA

Oct

300 h # DCA

Nov Dec

2,000 h # DCA

5,300 h # DCA \Rightarrow 5,936 h #
OPCB

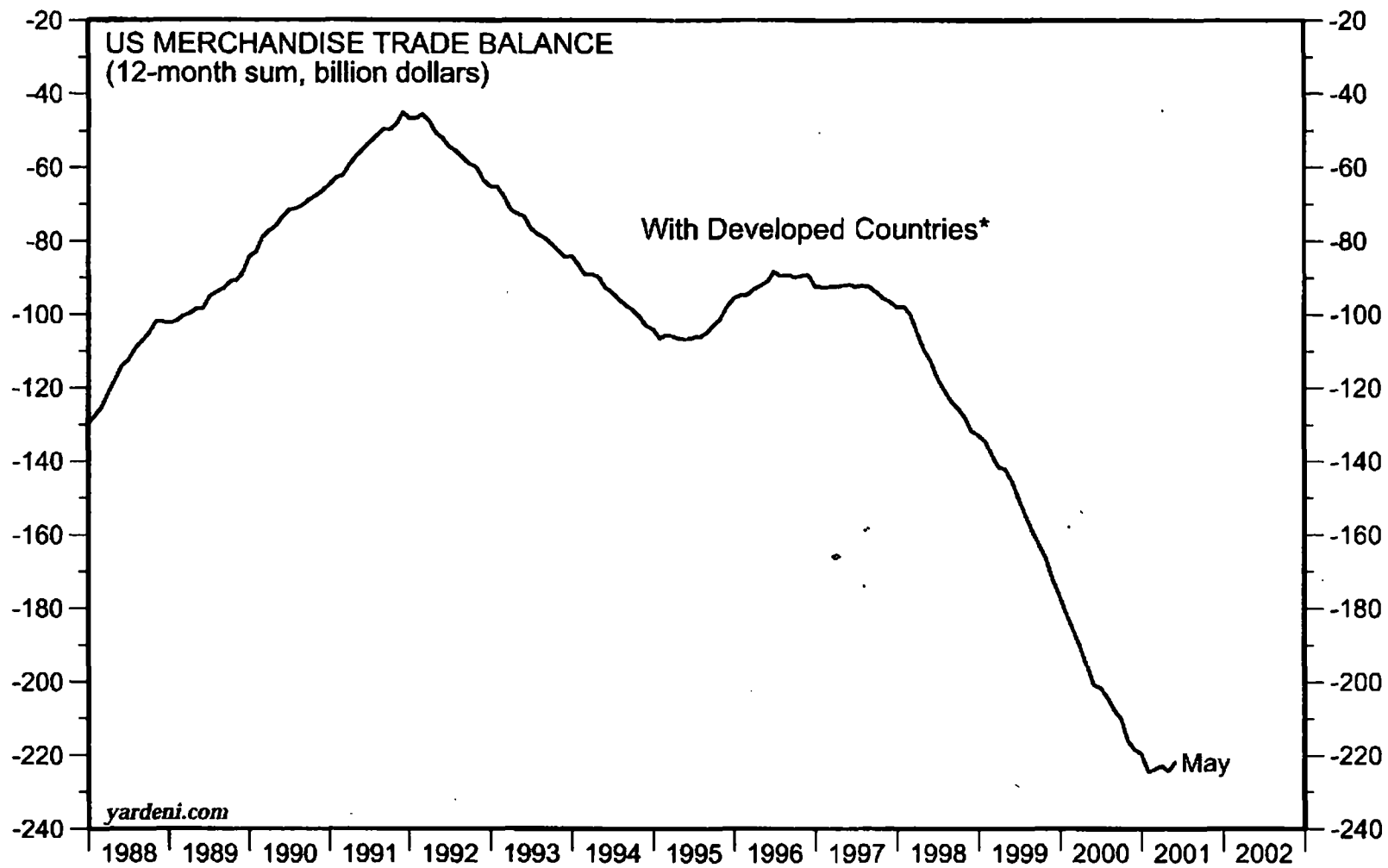
$$\frac{5,936 \text{ h}}{180 \text{ h}} = 33 \text{ cars}$$

Reduce Inv by 1 to 2 cars






31 \Rightarrow 32 cars

$$\frac{\quad}{2} \Rightarrow 16$$






$$16 - 6 = 10 \text{ left}$$



* Canada, Western Europe, Japan, Singapore, Hong Kong, Taiwan, and the Republic of Korea.

Cedar-Brand Products	
Butoxone®	<p>Offers the most economical broadleaf control available for soybeans, peanuts, and alfalfa.</p> <p>Downloads: (in pdf format, requires free Acrobat Reader) </p> <p>Butoxone® 175 Specimen Label Material Safety Data Sheet Technical Use Bulletin</p> <p>Butoxone® 200 Specimen Label Material Safety Data Sheet Technical Use Bulletin</p> <p>Butoxone® 7500 Specimen Label Material Safety Data Sheet Technical Use Bulletin</p> <p>All (pdf in zip file) All Butoxone Products</p>
Eradicane®	<p>A selective herbicide that provides excellent control of grasses and broadleaf weeds and sedges in sweet corn. <i>For sale outside the European Union.</i></p> <p>Downloads: (in pdf format, requires free Acrobat Reader) </p> <p>Specimen Label Material Safety Data Sheet</p>
fluometuron	<p>A selective herbicide that provides broad spectrum weed control in cotton.</p> <p>Downloads: (in pdf format, requires free Acrobat Reader) </p> <p>Specimen Label Material Safety Data Sheet</p>
Eptam®	<p>A selective herbicide that provides excellent control of annual grasses and broadleaf weeds in potatoes. <i>For sale outside the US, Canada and the European Union.</i></p>
Repose™	<p>For the control of most annual grasses and certain broadleaf weeds in cotton, dry bulb onions, dry bulb shallots, edible beans, field corn, forage legumes, garlic, grain sorghum, nonbearing fruit, nut crops and vineyards, peanuts, potatoes, rice, soybeans, sunflowers, sweet corn, sweet lupines, and tobacco.</p> <p>Downloads: (in pdf format, requires free Acrobat Reader) </p> <p>Specimen Label Material Safety Data Sheet</p>
Repose IT™	<p>For the control of most annual grasses and certain broadleaf weeds in turf.</p> <p>Downloads: (in pdf format, requires free Acrobat Reader) </p> <p>Specimen Label Material Safety Data Sheet</p>

CEC
 PRODUCTS

Shroud™	<p>A selective systemic herbicide used to control annual grasses and broadleaf weeds in field corn, soybeans, and peanuts.</p> <p>Downloads: (in pdf format, requires free Acrobat Reader) </p> <p>Specimen Label Material Safety Data Sheet</p>
SuppoRRt™	<p>An economical herbicide specially formulated to tankmix with glyphosate products for weed and grass control in RR soybeans.</p> <p>Downloads: (in pdf format, requires free Acrobat Reader) </p> <p>Specimen Label Material Safety Data Sheet Technical Use Bulletin</p>
Sutan®	<p>A selective herbicide for annual grass control in field, sweet, pop, and silage corn.</p> <p>Downloads: (in pdf format, requires free Acrobat Reader) </p> <p>Specimen Label Material Safety Data Sheet</p>
Ro-Neet®	<p>A selective herbicide that controls weeds in sugar beets, table beets, and spinach.</p> <p>Downloads: (in pdf format, requires free Acrobat Reader) </p> <p>Specimen Label Material Safety Data Sheet</p>
Tillam®	<p>A selective herbicide for weed control in tobacco, tomatoes, and sugar beets.</p> <p>Downloads: (in pdf format, requires free Acrobat Reader) </p> <p>Specimen Label Material Safety Data Sheet</p>

Other Crop Protection Chemicals manufactured by Cedar

DCA	Cedar is the only U.S. producer of this key intermediate in Diuron and Propanil.
diuron	Cedar is the only U.S. producer of this herbicide used for weed control in citrus , cotton , sugarcane , and rights-of-way.
linuron	A pre- and postemergence herbicide for weed control in crops such as cotton , potatoes , sorghum , carrots , soybeans , corn , parsnips , and others.
acetochlor	Used to control most annual grasses and certain broadleaf weeds and yellow nutsedge in a wide range of crops such as cabbage , citrus , coffee , corn (all types), cotton , green peas , maize , onion , orchards , peanuts , potatoes , rape , soybeans , sugar beets , sugarcane , sunflower , and vineyards .
alachlor	A selective systemic herbicide used to control annual grasses and broadleaf

alachlor	A selective systemic herbicide used to control annual grasses and broadleaf weeds in field corn , soybeans , and peanuts .
butachlor	A selective preemergence herbicide for control of most annual grasses and certain broadleaf weeds in seeded and transplanted rice .
metolachlor	Used to control certain broadleaf and annual grassy weeds in field corn , soybeans , peanuts , grain sorghum , potatoes , pod crops , cotton , safflower , stone fruits , nut trees , highway rights-of-way , and woody ornamentals .
propachlor	A selective preemergence herbicide for control of certain grasses and broadleaf weeds in corn and grain sorghum .
EPTC	A selective herbicide that provides excellent control of annual grasses and broadleaf weeds in potatoes and sweet corn .
molinate	A selective herbicide used to control broadleaf and grassy weeds in rice and other crops.
propanil	A postemergence herbicide used against grasses and broadleaf weeds in rice. (<i>Marketed exclusively by RICECO</i>)
pendimethalin	A pre- and postemergence herbicide used to control most annual grasses and certain broadleaf weeds in field corn, potatoes, rice, cotton, soybeans, tobacco, peanuts, sunflowers, turf, and other crops.
butylate	A selective herbicide for annual grass control in field , sweet , pop , and silage corn .
cycloate	A selective herbicide that controls weeds in sugar beets , table beets , and spinach .
pebulate	A selective herbicide for weed control in tobacco , tomatoes , and sugar beets .
dahemid & dichlormid	Safeners used in grass crop herbicides.

Product Groups

Chloroacetamides	<u>alachlor</u> , <u>metolachlor</u> , <u>acetachlor</u> , <u>propachlor</u>
Thiocarbamates	<u>EPTC</u> , <u>butylate</u> , <u>cycloate</u> , <u>pebulate</u> , <u>molinate</u>
Acetamides	<u>propanil</u> (<i>Marketed exclusively by RICECO</i>)
Substituted Ureas	<u>diuron</u> , <u>fluometuron</u> , <u>linuron</u>
Specialty Herbicides	Butoxone 175,200 & 7500;SuppoRRt;Sutan (butylate);RoNeet(cycloate); Tillam (pebulate); Eradicane (EPTC)
Crop Safeners	<u>dichlormid</u> , <u>dahemid</u>
Dinitroaniline	<u>pendimethalin</u>

RAW MATERIAL RECEIVING RECORD No 17930

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0925

RECEIVED BY
C. Robinson

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
10/19/00		13303	Net 45527

SHIPPER	CARRIER
P & D Nedlloyd	ACME 35274

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
80 80	B/T	W/H	NA	ICM

COMMENTS
200kg each. NO C & H is needed

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
Bennett	9:45

UNLOADED AT (tank number, unit, warehouse, etc.)
80 Drum

COMMENTS
CYCLOPANE - 1 - DICARBONSAFE - Dimeza Vest

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS

Container Transportation, Inc

Houston Branch

Work Order No
H26820Order Date
10/24/2000Customer B/L No
POCLHMB04025**STRAIGHT BILL OF LADING**
ORIGINAL - NOT NEGOTIABLE**Shipper:**P&O
C/O BCT
LA PORTE TX**Consignee:**CEDER CHEMICALS
49 PHILLIPS RD 311
HELENA AR

	Description	Weight	
20	POCU0368360 SAID TO CONTAIN: CHEMICALS SEAL # _____ NOT RESPONSIBLE FOR CLAIMS AFTER 48 HOURS NOT RESPONSIBLE FOR CONCEALED DAMAGE	39,000	

COD \$

PREPAID:

COLLECT:

Consignee: _____

PRINT FULL NAME

Signature: _____

Time In: _____

Drop: _____

Driver No: 128

Date: _____

Time Out: _____

Leave: _____

If the above mentioned container and applicable chassis are dropped, the condition of the equipment will be deemed good unless otherwise noted hereon, and the equipment becomes the responsibility of the consignee shown above. Any damage, theft or vandalism to said equipment or any component thereof will be the responsibility of the consignee.

RAW MATERIAL RECEIVING RECORD

№ 17955

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0745

RECEIVED BY
T. S. A. H.

SECTION 1

DATE	ORDER NO	CAR OR TRUCK NO	DECLARED WEIGHT
10/25/00	N/A	POCUD0348360	Net 39,000

SHIPPER	CARRIER
P&O	Container Transportation

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
20	20 footer	W/H	N/A	CD Pm
80 Pms	container	SEE CTS		

COMMENTS
SEE Bill of Lading 200Kg Drums

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
	0830

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT	UNLOADING TIMES	
NET 35,274	START TIME	END TIME

COMMENTS

Container Transportation, Inc
Houston Branch

Work Order No
H26942

Order Date
10/24/2000

Customer B/L No
POCLHMB04025

STRAIGHT BILL OF LADING
ORIGINAL - NOT NEGOTIABLE

Shipper:

P&O
C/O BCT
LA PORTE TX

Consignee:

CEDER CHEMICALS
49 PHILLIPS RD 311
HELENA AR

	Description	Weight
20	POCU0530131 SAID TO CONTAIN: CHEMICALS SEAL # <u>1561838</u> NOT RESPONSIBLE FOR CLAIMS AFTER 48 HOURS NOT RESPONSIBLE FOR CONCEALED DAMAGE	44,000

COD \$

PREPAID:

COLLECT:

Consignee:

Benny Forester

PRINT FULL NAME

Signature:

Benny Forester

Time In:

Drop:

Driver No:

348

Date:

Time Out:

Leave:

If the above mentioned container and applicable chassis are dropped, the condition of the equipment will be deemed good unless otherwise noted hereon, and the equipment becomes the responsibility of the consignee shown above. Any damage, theft or vandalism to said equipment or any component thereof will be the responsibility of the consignee.

RAW MATERIAL RECEIVING RECORD

Nº 17957

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0710

RECEIVED BY

T. SAIO

SECTION 1

DATE	ORDER NO	CAR OR TRUCK NO	DECLARED WEIGHT
10-26-00	N/A	POCV0530131	Net 44000

SHIPPER

PEO

CARRIER

PEO Container Transport

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
80	20 footer container	w/h	N/A	CDPM

COMMENTS

SEE Bills

200kg Dums

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
Berni Fonz	7:30

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

CYCL - Diac - 4-5h

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT

UNLOADING TIMES

NET 35.274

START TIME

END TIME

COMMENTS

This is to certify that the herein stated contents are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

This Memorandum is an acknowledgment that a Bill of Lading has been issued and is not the Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

INTERMODAL CARTAGE CO., INC.
5707 Holmes Rd., Memphis, TN 38141

Shipper No. _____

Carrier No. 1111

Date 11/11/80

(Name of Carrier)

(SCAC)

TO: Consignee <u>Intermodal Cartage Co., Inc.</u>		FROM: Shipper <u>Intermodal Cartage Co., Inc.</u>	
On Collect on Delivery shipments the biller (C.O.D.) must appear before consignee's name -- or as otherwise provided in Item 430 Sec 1			
Street <u>1111</u>		Street <u>1111</u>	
Destination <u>1111</u>		Zip Code <u>1111</u>	

No Shipping Units	MM	Kind of Packaging, Description of Articles, Special Marks and Exceptions	Weight (Subject to Correction)	RATE	CHARGES
1		<u>1111</u>			
		<u>1111</u>			
		<u>1111</u>			
		<u>1111</u>			
		<u>1111</u>			
		<u>1111</u>			
		<u>1111</u>			
		<u>1111</u>			
		<u>1111</u>			
		<u>1111</u>			

REMIT C.O.D. TO: ADDRESS Note - Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding \$ _____ PER _____	COD Amt: \$ _____ Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without payment on the date of delivery, the consignee shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges. <u>B. J. J.</u> (Signature of Consignee)	C.O.D. FEE: PREPAID <input type="checkbox"/> \$ _____ COLLECT <input type="checkbox"/> \$ _____ TOTAL CHARGES: \$ _____ PREPAID CHARGES: PREPAID <input type="checkbox"/> \$ _____ CHECKED <input type="checkbox"/> \$ _____ (Signature of Shipper)
--	---	---

RECEIVED, subject to the classifications and lawfully tied tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER	CARRIER
PER	PER
EMERGENCY RESPONSE TELEPHONE NUMBER	DATE

* Mark with "X" to designate Hazardous Material as defined in Title 49 of the Code of Federal Regulations. Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation (172.604).

AB0000028901

RAW MATERIAL RECEIVING RECORD

№ 17960

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0730

RECEIVED BY

TSAH

SECTION 1

DATE

ORDER NO

CAR OR TRUCK NO

DECLARED WEIGHT

10-26-00

N/A

POCU 0492725

Net N/A

SHIPPER

P & O Container

CARRIER

IMC Intermodal

QUANTITY

CONTAINER

DESTINATION

RAW MAT CODE #

DESCRIPTION

200 (circled)

20-footer

W/H

N/A

CDPM

COMMENTS

SEE BILLS 200 kg Dums

SECTION 2

RECIPIENT

TIME/SAMPLE/CERTIFICATE TAKEN TO LAB

Bennett Ford

7:40

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

LO DUNS CYCL - DICAR Leston (No from 4004)

SECTION 3

LAB TECHNICIAN

ACCEPT

REJECT

REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR

ACCEPT

REJECT

REASON FOR REJECTION

PLANT WEIGHT

UNLOADING TIMES

NET 26.455

START TIME

END TIME

COMMENTS

LSF Transportation Inc.

1834 Field Street • Hammond, IN 46320
Tel: 773-974-6082 • Fax: 219-933-4256

SERVING "CHICAGOLAND" WITH COMPLETE LTL & TL SERVICE
• ALSO FULL TRUCKLOAD COVERAGE IN
ILLINOIS, INDIANA, MICHIGAN, WISCONSIN, MISSOURI, OHIO

REMITTANCE COPY

DATE SHIPPED 10/19/00	REFERENCE NO. 1011844/5	TRAILER 98164	ORIGIN IL	DEST. AR	ACCOUNT RPAISON	BILLING DATE 10/19/00	PRO NO. 50618
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0020-0200
01-0000

AVENTIS CRUP SCIENCE
C/O F. B. FREIGHT PAYMENT
402 S. LAWRENCE AVE
HELENA AR 72342
870-572-3701
CEDAR Chemical Corp
49 Phillips Rd #311
SB
SUD LINE EAST YARD
9665 WEST LAWRENCE AVE
SCHILLER PARK IL 60176
BILL TO
PHONE FOULEND AG
C/O F. B. FREIGHT PAYMENT
PO BOX 1259
SOMERVILLE NJ 08876

PIECES	DESCRIPTION OF ARTICLES	WEIGHT	RATE	CHARGES
75	DICHLORANILINE IN CASE OF EMERGENCY CALL CHEMTREC 1-800-424-9300 SPILL, FIRE, ACID, EXPOSURE HAZARDOUS CLASS: DICH. ORANILINE SOLIDS, CLASS 6.1, UNCL. PG II CONT#CPSU1068796 20 PONE 4030 RUW:4 LFD:10/20/00 FUEL SURCHARGE	16,500 LBS		
75	THANK YOU FOR SHIPPING WITH LSF			
	TOTALS	16,500 LBS		10-21-00

Freight charges due and payable within seven days after delivery of shipment.

MC 240911

US DOT 480588

FED. ID 95-1823886

SCAT CODE LSFR

mid

Crag 919.549.2200

RAW MATERIAL RECEIVING RECORD

No 18099

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

RECEIVED BY

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

1-30-01 OCLU082959-3 Net

SHIPPER

CARRIER

P & O NEDLOYD

INTERMODAL

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
76		W/H	—	CPDM
200kg Drums				

COMMENTS

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

PLANT WEIGHT

UNLOADING TIMES

NET 33,510

START TIME

END TIME

COMMENTS

as well as marked numbers, or properly identified, on marked packages marked and labeled and the
 a regulation according to the applicable regulations of the Department of Transportation

This Shipping Order must be legibly filled in, in Ink, in Indelible Pencil, or in
 Carbon, and retained by the Agent

MODAL CARTAGE CO., INC.
 5707 Holmes Rd., Memphis, TN 38141

Shopper No 4-53786

Carrier No

Date 1-30-01

IMC

(Name of Carrier)

(ISCAC)

TO Consignee Cedar Chemicals FROM: Shipper Common User Gate

Street

Destination Helena, AL Zip Code Origin Mt. Pleasant, SC Zip Code

Route Vehicle Number

No Shipping Units	HM	Kind of Packaging Description of Articles Special Marks and Exceptions	Weight (Subject to Correction)	RATE	CHARGES
1		Load			
		CPDM			
		200kg Drums			
		33,510/lbs			
		Seal 700511			

(7600) CYCLOPROPAN DICA

REMIT COD. TO ADDRESS COD Amt. \$

Note - Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property
 The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

Subject to Section 7 of the conditions, if the shipment is to be delivered to the consignee without recourse on the carrier, the carrier shall sign the following statement
 The carrier shall not make delivery of the shipment without payment of freight and all other lawful charges

COD. FEE: PREPAID ☐ \$ COLLECT ☐ \$

TOTAL CHARGES: \$

FRIGHT CHARGES PREPAID ☐ Check box if charges are to be collected ☐

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination it is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment

Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns

SHIPPER PER Benni Jones CARRIER IMC PER Allen Jones DATE 1-30-01

* Mark with "X" to designate Hazardous Material as defined in Title 49 of the Code of Federal Regulations
 Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation
 (172.604)

AB0000028901

DELIVERY ORDER

P&O

KAYE POWELL

P & O NEDLLOYD
3875 Faber Place Drive
Suite 200

KAYE POWELL
PHONE: 843-566-7400
FAX: (843) 747-8238

North Charleston
SC 29405

DATE: 23 FEB 2001

TO: xcalibur/
ATTN: kerri
FAX: 843-971-9199

PLEASE SEE DELIVERY INFORMATION BELOW AND ARRANGE AS INDICATED.
ANY PROBLEMS OR QUESTIONS, PLEASE CONTACT ME IMMEDIATELY.
PLEASE NOTE RATE SHOWN BELOW. ANY DIFFERENCE MUST BE APPROVED
PRIOR TO INVOICING.

B/L #/COMMODITY	CONTAINER#	SE/TY WEIGHT(LBS)	HAZ TEMP
POCLHMK105250143	OCU0904465	20/GP 37487	N
CHEMICALS INORGANIC NOS		000000	

VESSEL CONTAINER(S) LOCATION

MVT1256 WANDO COMMON

CUSTOMS **L.F.D./PICKUP#**

1C

DELIVERY ADDRESS:

CEDAR CHEMICAL
49 PHILLIPS RD #311
BELENA, AR 72342 870-572-3701- LISA WALKER X249

REMARKS:

del mon 2/26 1pm

AB0000028901

**BDP INTERNATIONAL, INC.**

Page 2 of 2

147-31 176TH Street

Jamaica, NY. 11434

(718) 244-1300 FAX#: (718) 244-6866

BILL OF LADING FOR MOTOR CAR

Del To Ref# 5358260

Non-Ne

RECEIVED, subject to the terms and conditions on the reverse hereof, the property described below, in apparent good order except as noted (contents and of contents of packages unknown), marked, consigned, and destined as shown below. This Bill of Lading is not subject to any tariffs or classifications what ally determined or filed with any federal or state regulatory agency, except as specifically agreed to in writing by the shipper and the carrier.

IF CHARGES ARE TO BE PREPAID, WRITE OR STAMP HERE, TO BE PREPAID.

DATE

OUR REF NO

CUSTOMER'S ORDER NO

2000/10/19

A07311628-001

5358260

SHIPPER:
CREANOVA INC.
220 DAVIDSON AVENUE

IMPORTING CARRIER

NASHVILLE AVE WHARF

LYKES BROS STEAMSHIP

NEW ORLEANS

LYKES NAVIGATOR

VOWAY

10/23/00

BL NO

LYKLHAMB0722401

ANTWERP

PORT OF ORIGIN AIRPORT

SHIPPER, NO

CARRIER LOCAL DELIVERY OR TRANSFER BY

HOUSE-DOB HOUSE

ENTRY NR

GULF STATES INTERMODAL (FOR TABY)

9160546

DELIVER CONIGNED TO:

ROUTE

CEDAR CHEMICAL
49 PHILLIPS RD #311

HELENA
AR 72342
(919)-549-2100 CONTACT DAVE LINHERDT

NO. OF PKGS	HM	DESCRIPTION OF ARTICLES, SPECIAL MARKS & EXCEPTIONS	WEIGHT
-------------	----	---	--------

MUST BE INCLUDED IN ALL DELIVERY INSTRUCTIONS. IF THAT IS NOT POSSIBLE, A COPY OF THIS DELIVERY ORDER MUST ACCOMPANY FREIGHT TO FINAL DESTINATION. IF THERE ARE ANY PROBLEMS PLEASE CONTACT THE UNDERSIGNED IMMEDIATELY.
*****MUST CALL FOR A DELIVERY APPT.*****

TOTALS:	1	44004.26 LBS.	19960.00 KGS.
---------	---	---------------	---------------

I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are checked, packaged, marked and labeled in accordance with all applicable regulations for transport according to applicable international and national governmental regulations.

Per _____ Shipper

Subject to Section 7 of the Terms and Conditions, if the shipment is to be delivered to the consignee without recourse on the consignment, the consignor shall sign the following statement: the carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of consignor)

Carrier's liability is for actual loss unless otherwise stated below. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding \$ _____ per pound. The value is hereby declared to be \$ _____

EMERGENCY RESPONSE INFORMATION OBTAINED

EQUIPMENT IS PROPERLY PLACED

OPERATOR HAS DOT EMERGENCY RESPONSE GUIDE BOOK

AGENT OR CARRIER

FOR CHEMICAL
EMERGENCY

SPILL, LEAK, FIRE,
EXPOSURE, OR ACCIDENT

(800) 424-7500

BDP INTERNATIONAL, INC. - AS AGENT

BRIDGE PL 000

(718) 244-1300

AB0000028901

DELIVERY



ORDER

P&O



ALEX FARGARSON

P & O NEDLLOYD
P&O Nedlloyd
1225 North Loop
4th Floor - Suite 420
Houston
TX 77008

ALEX FARGARSON
PHONE: 713-880-0900
FAX: 7138802608

DATE: 18OCT2000

TO: ACME TRUCK LINE/AOP
ATTN: Dave
FAX: 281-842-7577

PLEASE SEE DELIVERY INFORMATION BELOW AND ARRANGE AS INDICATED.
ANY PROBLEMS OR QUESTIONS, PLEASE CONTACT ME IMMEDIATELY.
PLEASE NOTE RATE SHOWN BELOW. ANY DIFFERENCE MUST BE APPROVED
PRIOR TO INVOICING.

3/L #/COMMODITY	CONTAINER#	SZ/TY WEIGHT(LBS)	HAZ	TEMP
POCLHMB040253097	GSTU2809915	20/GP 43527	N	
CHEMICALS ORGANIC NOS		000000		

VESSEL CONTAINER(S) LOCATION

UK0101 BC

CUSTOMS

L.F.D./PICKUP#

RELEASED

DELIVERY ADDRESS:

EDAR CHEMICAL
9 PHILLIPS RD #311
ELENA, AR
19-549-2100 DAVE LINHERDT

REMARKS:

Signature: Bennis FargarsonDate: 10-19-00

RAW MATERIAL RECEIVING RECORD

Nº 18063

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

1620

RECEIVED BY

C. Robinson

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

12-5-00

Aventis

Tm4-223002-1

Net

SHIPPER

Cleanova

CARRIER

Gulf States

QUANTITY

CONTAINER

DESTINATION

RAW MAT CODE #

DESCRIPTION

1-load

S/C

unit-5

NA

Sodium
Methylate

COMMENTS

C of A is in Lab

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

[Signature]

UNLOADED AT (tank number, unit, warehouse, etc.)

T-5213

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

[Signature]

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

[Signature]

PLANT WEIGHT

UNLOADING TIMES

NET 40640

START TIME

17:40

END TIME

20:10

COMMENTS

WEIGHED ON A FAIRBANKS SCALE

DATE 12/5/00

CUSTOMERS NAME CREANOVA / TADY America INC

ADDRESS _____

COMMODITY Sodium Methy/ate Solution

CARRIER Gulf STATE 37/Tmlu223002-1

REMARKS
00 50 30 1147:40 0022

77280 04:25PM DE 05 00

36640 08:26PM DE 05 00

40640

FAIRBANKS SCALE CAT. 083908

LBS. GROSS

LBS. TARE - DRIVER ON _____ OFF _____

LBS. NET @ _____ PER LB. PRICE _____

SHIPPER _____

WEIGHER _____

OCT. 16. 2000 3:52PM

NO. 6964 P. 1/1

FRUIT DELIVERY INSTRUCTIONS

Taby America Inc.
1150 Raritan Road
Cranford, NJ 07016
Tel: 908-931-1700 Fax 908-931-1002

Date: October 16, 2000

To: Gulf States Marine Terminal
Attn: Dispatch/ Jeanine
From: Bob Hermiston

Delivery order for Taby America owned tankcontainer. Trucking to be billed to Taby America Inc.
REF.#42.1147 must be included on all invoices.

CONTAINER NUMBER: TMLU 223002-1

NET WEIGHT: 18,620 KGS

PRODUCT: SODIUM METHYLATE SOLUTION
IMDG 3.3 UN 1993 FLPT +27C

ORDER#: 0030228584 / PO# 616572

EX-VESSEL: LYKES EXPLORER / LYKES

ETA/PORT: 10/14/00 - NEW ORLEANS

BL: HAMB0722301

PICKUP PRIOR TO EXPIRATION TO FREE TIME:
BROKER (WILL SEND PAPER WORK):

CONSIGNEE: CEDAR CHEMICAL
49 PHILLIPS RD #311
HELENA, AR 72342

DATE: TBA
TIME:

CONTACT: LISA WALKER
TELEPHONE: 870-572-3701 EXT 249

TECHNICAL REQUIREMENTS. PLEASE CHECK WITH CONSIGNEE: Please pick-up the tank from pier on Friday October 20 and bring it back to Gulf States for loaded ground storage. Tank must scale heavy and light. Please call plant for offloading requirements.

CLEAN AT: GULF STATES

DROP EMPTY AT: GULF STATES

Driver is responsible to ensure Tankcontainers is properly placarded, stenciled, and labeled per CFR and IMDG regulations. Any questions or problems please contact the undersigned as soon as possible. Any additional charges such as drivers detention or extra trucking must be advised to Taby America immediately.

Regards
Bob Hermiston
Import Operations

PASSWORD:
MAY

1 FN 10/20
AB0000028901

GULF STATES INTERNATIONAL, INC.

7300 N. PETERS

(504) 279-8544

ARAB1, LA. 70032

FAX (504) 277-0113

BILL TO: TADY AMERICA, INC.

REFERENCE #: 42.1147

REFERENCE #2:

TANK # 1: TNU 22302 (1) TANK # 2:

WORK ORDER #: 136253

CHASSIS #: 300882 CHASSIS #2:

DRIVER #1: L.B. POOLE

DRIVER #2:

PICK UP TANK AT: GULF STATES MARINE TERMINAL, ARAB1, LA.

UNLOAD TANK AT: CEDAR CHEMICALS, WEST HELENA, AR.

DELIVER TANK TO: GULF STATES MARINE TERMINAL, ARAB1, LA.

SPECIAL:

CHECK TANK IN FOR: TADY

BOOKING:

CUT OFF DATE & TIME:

VESSEL:

SS LINE:

FEU:

APPOINTMENT DATE: 12-05-2000

APPOINTMENT TIME: 4:00 PM

PLANT ARRIVAL TIME: 4:00 PM

PLANT EXIT TIME: 8:30 PM

TOTAL DETENTION TIME: 0

GROSS WEIGHT: TARE:

NFT: 0

PRODUCT INFO: SEE PAPERWORK

SPECIAL INSTRUCTIONS: ORDER# 0030220504/616572

This is to certify that the articles above are properly described, packed,
and marked according to DOT regulations.

Shipper's Signature _____

RECEIVED IN GOOD CONDITION EXCEPT AS NOTED.

CONSIGNEE'S SIGNATURE

Handwritten signature

AB0000028901

Craig Dodson Avents, Conn

RAW MATERIAL RECEIVING RECORD

No 18115

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0830

RECEIVED BY

JP

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
01/05/01	Aventis	TCVU252037-6	Net 19,920 43915

SHIPPER

Gulf States

CARRIER

Gulf States

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
one load	C/Cont.	unit 5	NA	Sodium Methylat.

COMMENTS



SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
-----------	--------------------------------------

J. Burt

1030

UNLOADED AT (tank number, unit, warehouse, etc.)

T-5213

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
----------------	--------	--------	----------------------

CT

✓

COMMENTS

No C of A OK per Jim K.

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
------------------	--------	--------	----------------------

M. Kauling

✓

PLANT WEIGHT

UNLOADING TIMES

NET

START TIME

END TIME

COMMENTS

OK to unload per Jim Kauling

GULF STATES INTERMODAL, INC.
7300 N. PETERS
ARABI, LA. 70032

(504) 277-8544

FAX (504) 277-0113

TABY AMERICA, INC.

42.1172

TANK # 1: TLUU 252037 (6) TANK # 2:

138192

GSIC 300107

CLARENCE P DAGGS

GULF STATES MARINE TERMINAL, ARABI, LA.

UNLOAD CEDAR CHEMICALS, WEST HELENA, ARK.

GULF STATES MARINE TERMINAL, ARABI, LA.

TABY

APPOINTMENT DATE: 01-05-2001

APPOINTMENT TIME: 8:00 am

8am

78,740 35,800

42,920

SEE PAPERWORK

ORDER# 0034 3/6/6572

This is to certify that the articles above are properly described, packed,
and marked according to DOT regulations.

Shipper's Signature _____

RECEIVED IN GOOD CONDITION EXCEPT AS NOTED.

CONSIGNEE'S SIGNATURE Mac Sullivan

AB0000028901

RAW MATERIAL RECEIVING RECORD № 18173

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

1140

RECEIVED BY

DL

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

1/22/01

NA

TABU240343-5

Net 43915

SHIPPER

Qventis

CARRIER

Huff State

QUANTITY

CONTAINER

DESTINATION

RAW MAT CODE #

DESCRIPTION

1

S/c

unit 5

N/A

sodium
methoxide

COMMENTS

no C of A OK to enter per Jim Crivinsky

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

D. Lawson

N/A

UNLOADED AT (tank number, unit, warehouse, etc.)

T-5213 Unit 5

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

M. Sullivan

✓

PLANT WEIGHT

UNLOADING TIMES

NET 43,740

START TIME

END TIME

22:10

COMMENTS

OCT. 23. 2000 2:39PM

NO. 7814 P. 1

TRUCK DELIVERY INSTRUCTIONS

Taby America Inc.
1150 Raritan Road
Cranford, NJ 07016
Tel: 908-931-1700 Fax 908-931-1002

Date: October 23, 2000

To: Gulf States Marine Terminal
Attn: Dispatch/ Jeanine
From: Bob Hermiston

Delivery order for Taby America owned tankcontainer. Trucking to be billed to Taby America Inc.
REF.#42.1172 must be included on all invoices.

CONTAINER NUMBER: TCVU 252037-6
TABU 240343-5

NET WEIGHT: 19,920 KGS
19,920 KGS

PRODUCT: SODIUM METHYLATE SOLUTION

ORDER#: 0030228583+85 / PO# 616572

~~IMDG 3.3 UN 1993 FIPT 27C~~

3(8) UN 1289 FIPT 27C
EX-VESSEL: GULF BRIDGE / YANG MING

ETA/PORT: 10/20/00 - NEW ORLEANS

BL: T670010654

PICKUP PRIOR TO EXPIRATION TO FREE TIME:
BROKER (WILL SEND PAPER WORK):

CONSIGNEE: CEDAR CHEMICAL
49 PHILLIPS RD #311
HELENA, AR 72342

DATE: TBA
TIME:

CONTACT: LISA WALKER
TELEPHONE: 870-572-3701 EXT 249

TECHNICAL REQUIREMENTS, PLEASE CHECK WITH CONSIGNEE: Please pick-up the tank from pier on Last Free Day and bring it back to Gulf States for loaded ground storage. Tank must scale heavy and light. Please call plant for offloading requirements.

CLEAN AT: GULF STATES

DROP EMPTY AT: GULF STATES

Driver is responsible to ensure Tankcontainers is properly placarded, stenciled, and labeled per CFR and IMDG regulations. Any questions or problems please contact the undersigned as soon as possible. Any additional charges such as drivers detention or extra trucking must be advised to Taby America immediately.

Regards
Bob Hermiston
Import Operations

AB0000028901

GULF STATES INTERMODAL, INC
7300 N. PETERS
ARABI, LA. 70032

(504) 279-8544

FAX (504) 277-0113

BILL TO: TABY AMERICA, INC.

REFERENCE #1: 42.1172

REFERENCE #2:

TANK # 1: TABU 240343 [5] TANK # 2:

WORK ORDER #: 139440

CHASSIS #: GSIC 300289

CHASSIS #2:

DRIVER #1: CHESTER L HART DRIVER #2:

PICK UP TANK AT: GULF STATES MARINE TERMINAL, ARABI, LA.

UNLOAD TANK AT: CEDAR CHEMICALS, WEST HELENA, ARK.

DELIVER TANK TO: GULF STATES MARINE TERMINAL, ARABI, LA.

SPECIAL:

CHECK TANK IN FOR: TABY

BOOKING:

OUT OFF DATE & TIME:

VESSEL:

SS LINE:

PO:

APPOINTMENT DATE: 01-22-2001

APPOINTMENT TIME: 10:00 am

PLANT ARRIVAL TIME: 0930

PLANT EXIT TIME: 2215

TOTAL DETENTION TIME: 0 12 hrs 15 min

GROSS WEIGHT: 78740 TARE: 35000 NET: 0 43740

PRODUCT INFO: LOADED TANK/SEE PAPERWORK

SPECIAL INSTRUCTIONS ORDER # 0030228585 PO #616572

This is to certify that the articles above are properly described, packed,
and marked according to DOT regulations.

Shipper's Signature _____

RECEIVED IN GOOD CONDITION EXCEPT AS NOTED.

CONSIGNEE'S SIGNATURE

Mark McBride

RAW MATERIAL RECEIVING RECORD No 18266

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

11:00

RECEIVED BY

mt

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

2-07-01

616572-555660

20364

ICTU 260049-0

1149

Net

203649

SHIPPER

~~BOASO~~ Baby America

CARRIER

Guif States

BOASO Am.

1144/4

QUANTITY

CONTAINER

DESTINATION

RAW MAT CODE #

DESCRIPTION

20160 Kgs

T/T

UNIT #5

~~SOD~~ ^{NH}

SODIV - methyl

COMMENTS

NO COFA

(Jim Kruslow said to unload.)

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

D. Jackson

1645

UNLOADED AT (tank number, unit, warehouse, etc.)

T-5213

COMMENTS

NO CF

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

TLP

✓

NO COFA

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

H

✓

PLANT WEIGHT

UNLOADING TIMES

NET 44560

START TIME

11300

END TIME

1630

COMMENTS

BOASSO AMERICA HOUSTON

2727 APPELT DRIVE

HOUSTON, TX. 77015

(281) 452-1140

FAX (281) 452-2050

BILL TO: TABY AMERICA INC

REFERENCE #: 42.0006

REFERENCE #2 616572/5556600

TANK # 1: ICTU 260049 [0] TANK # 2:

WORK ORDER # 20364

CHASSIS #:

CHASSIS # 2:

TH#1149 MUSIC

DRIVER #1: CAMPBELL, AL DRIVER #2

PICK UP TANK AT: BOASSO AMERICA HOUSTON, TX

UNLOAD TANK AT: CEDAR CHEMICAL, 49 PHILLIPS RD, #311 HELENA, AR

DELIVER TANK TO: BOASSO AMERICA HOUSTON, TX

CHECK TANK IN FOR:

BOOKING:

CUT OFF DATE AND TIME:

VESSEL:

SS LINE:

POD:

- 0

APPOINTMENT DATE: 02-07-2001

APPOINTMENT TIME: 8:00 am

PLANT ARRIVAL TIME:

PLANT EXIT TIME:

TOTAL DETENTION TIME: 0

GROSS WEIGHT: TARE:

NET: 0

PRODUCT INFO: SEE PAPERWORK

SPECIAL INSTRUCTIONS

This is to certify that the articles above are properly described, packed,
and marked according to DOT regulations.

Shipper's Signature _____

RECEIVED IN GOOD CONDITION EXCEPT AS NOTED.

CONSIGNEE'S SIGNATURE Andy Seena

USED TWO FITTINGS
ONE 3 INCH TO 2 INCH
RE NUC EA

AB0000028901

RAW MATERIAL RECEIVING RECORD No 18394

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

RECEIVED BY

1355

JP

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

2/27/01 Aventis 957- Net 41.756

SHIPPER

CARRIER

Aventis

Greenville Trans.

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
one load	C"Cont.	unit 5	NA	sodium methoxide

COMMENTS

Cof A is waived Per J. Krustling

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

CT ✓

COMMENTS

Per Jim K.

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

McBride ✓

PLANT WEIGHT

UNLOADING TIMES

NET 41920 START TIME 1410 END TIME 17:10

COMMENTS

FEB. 26. 2001 11:53AM

NO. 3146 P. 1/1

ATTN: Ted

only one Tank to be Del. CBX 852135-9

DELIVERY INSTRUCTIONS

Taby America Inc.
1150 Raritan Road
Cranford, NJ 07016
Tel: 908-931-1700 Fax: 908-931-1002

*Thanks,
Nance*

Date: February 23, 2001

To: Greenville / Attn: Ted
To: Boasso / Attn: Jeanine

Fax: 757-934-1801
Fax: 504-279-0113

BOASSO PLEASE ACCEPT THE FOLLOWING TANKS IN FOR CLEANING ONCE EMPTY.

From: Nance Gonzalez

Delivery order for Taby America owned tank container. Trucking to be billed to Taby America Inc.
REF # 42.0097 must be included on all invoices.

CONTAINER NUMBER: ~~GRX 852135-9~~
CRXU 852135-9

NET WEIGHT: 18,940 KGS - 41,256 LBS.
18,980 KGS

PRODUCT: SODIUM METHYLATE SOLUTION
IMDG 3.3, UN 1289 (FLPT - 29C), PG III
Secondary Hazard Corrosive

CUSTOMER REF: PO 5602090 +
5602180

EX-VESSEL: ALLIGATOR LIBERTY 101A-COM

ETA/PORT: 2-21-01 NORFOLK

PICKUP PRIOR TO EXPIRATION TO FREE TIME.

CALL STEAMSHIP LINE FOR E.I.R. # FOR PICK-UP AT THE PIER

DELIVERY POINT: CEDAR CHEMICAL CORP.
49 PHILLIPS ROAD #311
HELENA, AR 72342

DELIVERY DATE: TUESDAY, FEB. 27
TIME: SOON AS POSSIBLE

CONTACT: LISA WALKER

TELEPHONE: 870-572-3701 EXT. 249

TECHNICAL REQUIREMENTS PLEASE CHECK WITH CONSIGNEE: Please deliver the following tanks on Tuesday Feb. 12th in the afternoon.

CLEAN AT: BOASSO

DROP EMPTY AT: BOASSO - NEW ORLEANS

T# 504-279-8544

F# 504-277-0113

ATTN: JEANINE

Driver is responsible to ensure tank containers are properly placarded, stenciled, and labeled per CFR and IMDG regulations. Any questions or problems please contact the undersigned as soon as possible. Any additional charges such as drivers detention or extra trucking must be advised to Taby America immediately.

SHIPPER'S CERTIFICATION

Best Regards,
Nance Gonzalez

THE ABOVE ARTICLES ARE PROPERLY DESCRIBED, PACKED, MARKED AND CONDITIONED FOR TRANSPORTATION ACCORDING TO THE REGULATIONS OF THE INTERSTATE COMMERCE COMMISSION, AND ARE SHIPPED SUBJECT TO THE TARIFFS OF THE CARRIER, OR ITS AGENTS, EFFECTIVE THIS DATE.

AB0000028901

RAW MATERIAL RECEIVING RECORD No 17937

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE 0740		SECTION 1		RECEIVED BY T. S. Air
DATE	ORDER NO	CAR OR TRUCK NO	DECLARED WEIGHT	
10/21/00	N/A	98-164	Net 16,500 33069	
SHIPPER Rhone-Powlene			CARRIER LSF	
QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
75 drums	B/T	W/H	N/A	DCA, 2.4

COMMENTS
See Lisa Walker 200^{lb} per each

SECTION 2	
RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
Dan die Frank	07:45
UNLOADED AT (tank number, unit, warehouse, etc.) Warehouse	

COMMENTS
N/A (NO COA)

SECTION 3			
LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
PF		✓	
COMMENTS no CoA. Unit not ready to be certified yet.			

SECTION 4			
SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
J. V. [Signature]	✓		
PLANT WEIGHT	UNLOADING TIMES		
NET	START TIME	END TIME	
COMMENTS			

RAW MATERIAL RECEIVING RECORD

No 17956

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

1100

RECEIVED BY

T.S

SECTION 1

DATE ORDER NO CAR OR TRUCK NO DECLARED WEIGHT

10-25-00

N/A

99-766

Net 16500

SHIPPER

Rhone Poulenc

CARRIER

LSF

QUANTITY

CONTAINER

DESTINATION

RAW MAT CODE #

DESCRIPTION

75 drums

BLT

w/A

N/A

2.4

DCA

COMMENTS

SEE LISA WALKER 200kg drums

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

[Signature] 10:50

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

PLANT WEIGHT

UNLOADING TIMES

NET 33,069

START TIME

END TIME

COMMENTS

LSF Transportation

1884 E. 14th Street - Chicago, IL 60605
 TEL: 312/488-4250 FAX: 312/488-4256

SERVING "CHICAGOLAND" WITH COMPLETE LTL & TL SERVICE
 ALSO ALL TRUCKLOAD COVERAGE IN
 ILLINOIS, INDIANA, MICHIGAN, WISCONSIN, MISSOURI, OHIO

REMITTANCE COPY

PLEASE SHOW THIS PRO NUMBER
 ON ALL INVOICES

DATE SHIPPED	10/19/00	PRO NUMBER	10184475	TRAILER	98167	ORIGIN	72	DEPT	AR	ACCOUNT	RFASUNJ	BILLING DATE	10/19/00	PRO NUMBER	53615
--------------	----------	------------	----------	---------	-------	--------	----	------	----	---------	---------	--------------	----------	------------	-------

AVENTIS DROP SCIENCE
 C/O BLACKHAWK WAREHOUSE & LEAS
 407 PHILLIPS 311 ROAD
 HELENA AR 72342

PO# CPSU1071634

SB

300 LINE EAST YARD
 7665 WEST LAWRENCE AVE
 SCHILLER PARK IL 60176

BILL TO

RHONE POULENC AG
 C/O FTS FREIGHT PAYMENT
 PO BOX 1259
 SOMERVILLE NJ 08876

PROCES	DESCRIPTION OF ARTICLES	WEIGHT	RATE	CHARGES
75	DICHLORAN FINE IN CASE OF EMERGENCY CALL CHEMTREC 1-800-424-9300 SPILL, FIRE, ACID, GAS, LIQUID, SOLID, HAZARDOUS CLASS, SOLIDS, CLASS, CONT#CPSU1071634, ROW#4, FUEL SURCHARGE	16,500 LBS LBS LBS LBS LBS LBS LBS LBS		
75	THANK YOU FOR SHIPPING WITH LSF INC.			
	TOTALS	16,500 LBS		

Freight charges due and payable within seven days after delivery of shipment

RAW MATERIAL RECEIVING RECORD

№ 17964

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

1200

RECEIVED BY

T. Sain

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
10-26-00	N/A	98-127	Net 16,500

SHIPPER

Rone Poulenc

CARRIER

LSF

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
75	B/T	W/H	N/A	24
	2-4 DCA			DCA
				Drums

COMMENTS

SEE Bills 200kg Ea.

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

Bonne for 2

12:10

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

--	--	--	--

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

--	--	--	--

PLANT WEIGHT

UNLOADING TIMES

NET 33,069

START TIME

END TIME

COMMENTS

LSF Transportation
 134 Field Street • Hammond, IN 46320
 Tel IN 218-833-4252 • Tel IL 773-374-6082 • Fax 218-833-4256

SERVING "CHICAGOLAND" WITH COMPLETE LTL & TL SERVICE
 • ALSO FULL TRUCKLOAD COVERAGE IN
 ILLINOIS, INDIANA, MICHIGAN, WISCONSIN, MISSOURI, OHIO

REMITTANCE COPY

PLEASE SHOW THIS PRO NUMBER
 ON RECEIPTS

DATE SHIPPED	REFERENCE/B/L	TRAILER	ORIGIN	DEST.	ACCOUNT	BILLING DATE	PRO NO.
10/19/00	1011844/5	99690	ZZ	AR	RPASOJ	10/19/00	53616

COGS-GRM

AVENTIS CROP SCIENCE
 C/O BLACKHAWK WAREHOUSE & LEAS
 407 PHILLIPS 311 ROAD
 HELENA AR 72342

PO# CP5U1055757

ST-ADM

SOD LINE EAST YARD
 9665 WEST LAWRENCE AVE
 SCHILLER PARK IL 60176

SE

BILL TO

RHONE POULENC AG
 C/O FTS FREIGHT PAYMENT
 PO BOX 1259
 SOMERVILLE NJ 08876

PIECES	DESCRIPTION OF ARTICLES	WEIGHT	RATE	CHARGES
75	DICHLORANILINE IN CASE OF EMERGENCY CALL CHEMTREC 1-800-424-9300 SPILL, FIRE, ACID, VLE. EXPOSURE HAZARDOUS CLASS: DICHLORANILINE SOLIDS, CLASS 6.1 CONT#CP5U1055757 ROW:4 LFD:10/20/00 FUEL SURCHARGE	16,500 LBS		
75	THANK YOU FOR SHIPPING WITH LSF!	TOTALS 16,500 LBS		

Freight charges due and payable within seven days after delivery of shipment.

MC 240911

US DOT 480588

FED. ID 35-1823688

SCAT CODE LSFR

RAW MATERIAL RECEIVING RECORD № 17984

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0830

RECEIVED BY

JP

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
11/4/00	NA	99690	Net 16,500

SHIPPER

Rhone Poulenc AG

CARRIER

LSF

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
75 Drums	B/T	Warehouse	NA	24 DCA
		for unit #5		

COMMENTS

200kg Drums

SECTION 2

RECIPIENT	TIME/SAMPLE/CERTIFICATE TAKEN TO LAB
-----------	--------------------------------------

MLitt/Don

NA

UNLOADED AT (tank number, unit, warehouse, etc.)

Warehouse

COMMENTS

Good Day!! C.O.A to be Faxed

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
H. Allen	✓		

PLANT WEIGHT

33.0697A

UNLOADING TIMES

START TIME

08:45

END TIME

10:00

COMMENTS

Unloaded @ main warehouse

RAW MATERIAL RECEIVING RECORD No 18290

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
13:00

TTNU 2242341
SECTION 1

RECEIVED BY
JW

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
2/12/01	N/A	53132	Net 36376

SHIPPER	CARRIER
500 Line E AVENTIS	LSF

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
75	B/T	WAREHOUSE	N/A	2-4 DCA

COMMENTS
O.K. TO UNLOAD Per Lisa W.

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
P. Clark	1:08

UNLOADED AT (tank number, unit, warehouse etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT	UNLOADING TIMES	
NET 33.069	START TIME	END TIME

COMMENTS

LSF Transportation Inc.

124 Field Street • Hammond, IN 46320

Tel: 219-933-4252 • Tel IL: 773-374-6082 • Fax: 219-933-4258

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ALSO FULL TRUCKLOAD COVERAGE IN

ILLINOIS, INDIANA, MICHIGAN, WISCONSIN, MISSOURI, OHIO

REMITTANCE COPY

 PLEASE SHOW THIS PRO NUMBER
ON REMITTANCE

DATE SHIPPED	REFERENCE/BL	TRAILER	ORIGIN	DEST.	ACCOUNT	BILLING DATE	PRO NO.
7/20/79	CONFIDENTIAL	53132	IL	IN	REASON	7/20/79	55029

CO-OP-6-2-8-1

 ADVERTISER: SCIENTIFIC
 CHEMICALS
 47 PHILLIPS RD #211
 DECATUR AL 35604

 870-572-3701 X249
 HOTA 2341

SH-ADAMS

 ADD LANE EAST TOWN
 105 WEST LAWRENCE AVE
 DECATUR PARK IL 60172

BILL TO

 EDUARD P. H. & CO.
 1011 E. 10TH ST. #1000
 JEN 604 1250
 SUMMITVILLE MO 65081

PIECES	DESCRIPTION OF ARTICLES	WEIGHT	RATE	CHARGES
75	TOXIC, IRRITANT, SOLID IN CASE OF EMERGENCY CALL... CHEMICAL 800 724-7300 HAZARDOUS MATERIAL UNCLAS, DICHLOROPHENYLENE, SOLID, 100% UNCLAS, 100% UNCLAS, 100% POISONOUS (SOLID) CONFIDENTIAL (242-943) LBS: 14.00 100% UNCLAS 100% UNCLAS, 100% 100% UNCLAS 100% UNCLAS, 100% 100% UNCLAS 100% UNCLAS, 100%	14.00	1.00	
75	<i>3 Clack</i>			
	TOTALS	14.00	1.00	

Freight charges due and payable within seven days after delivery of shipment.

MC 240911

US DOT 460588

FED. ID 35-1823686

SCAT CODE LSFR

AB0000028884

RAW MATERIAL RECEIVING RECORD No 18303

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE 0725	TRLU3539483 SECTION 1	RECEIVED BY LP
-------------------------	--------------------------	-------------------

DATE 2/15/01	ORDER NO. 55080	CAR OR TRUCK NO. 511757	DECLARED WEIGHT Net 36,376
-----------------	--------------------	----------------------------	-------------------------------

SHIPPER Oventis	CARRIER LSF TRANS.
--------------------	-----------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
75	BIT	Whse	3010	DCA

COMMENTS

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
J. Clark	7:31

UNLOADED AT (tank number, unit, warehouse etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS

LSF Transportation Inc.

1834 Field Street • Hammond, IN 46320

Tel 1 919-933-4263 • Tel IL 773-374-6083 • Fax 219-933-4268

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ALSO FULL TRUCKLOAD COVERAGE IN

ILLINOIS, INDIANA, MICHIGAN, WISCONSIN, MISSOURI, OHIO

REMITTANCE COPYPLEASE SHOW THIS PRO NUMBER
ON INVOICE

DATE SHIPPED	REFERENCE #	TRAILER	ORIGIN	DEST.	ACCOUNT	BILLING DATE	PRO NO.
2/08/01	CONT#1RLU3539483	97960	ZZ	AK	RFASUNJ	2/14/01	55080

CONSIGNEE

AVENTIS CROP SCIENCE
C/O LELAR CHEMICAL CORP
49 PHILLIPS RD #311
HELENA AR 72342

Dec: 2/15/01

PU# REF#101200249

Tel: 870-572-3701

SBX

SHIPPER

500 LINE EAST YARD
9665 WEST LAWRENCE AVE.
SCHILLER PARK IL 60176

BILL TO

RHONE POULENC AG
C/O FTS FREIGHT PAYMENT
PO BOX 1259
SOMERVILLE NJ 08876

PIECES	DESCRIPTION OF ARTICLES	WEIGHT	RATE	CHARGES
75	DICHLORANILINE 2.4 IN CASE OF EMERGENCY CALL... CHEMTREC 800-424-2200 HAZARDOUS MATERIAL USDF; DICHLORANILINE SOLIDS, CLASS 6.1, UN1590 MARINE POLLUTANT CONT#1RLU3539483 PU# 1 FUEL SURCHARGE	36,376 LBS LBS LBS LBS LBS LBS LBS LBS LBS		
75	<i>Benn Rogers</i>	TOTALS	36,376 LBS	

Freight charges due and payable within seven days after delivery of shipment

MC 240911

US DOT 460588

FED. ID 35-1823686

SCAT CODE L3FR

AB0000028884

DATE	RECEIVED BY
------	-------------

DECLARED WEIGHT

2/24/61	CARLE 3439064	Net
---------	---------------	-----

ADVENTIS	CARRIER
	LSF

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
75 Drift		UNIT 5	N/A	2,4 DCA
@ 200Kg.				

COMMENTS

SECTION 2	
RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB

--	--

UNLOADED AT (tank number, unit, warehouse, etc.)
--

COMMENTS

SECTION 3			
-----------	--	--	--

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

SECTION 4			
-----------	--	--	--

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT	UNLOADING TIMES	
NET 33.069	START TIME	END TIME

COMMENTS

RAW MATERIAL RECEIVING RECORD No 18392

CEDAR CHEMICAL 9000-1 REV: C

JP

TIME IN AT GATE
1120

XTRU2014947
SECTION 1

RECEIVED BY
[Signature]

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

2/27/01 *101209701* *511757-53132* Net *36,376*

SHIPPER *Adventis Crop Science* CARRIER *JSF*

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
<i>80</i>	<i>B/T</i>	<i>whse</i>	<i>3010</i>	<i>DCA</i>
<i>@ 200Kg</i>				

COMMENTS

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

L. Clark *11:30*

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

PLANT WEIGHT UNLOADING TIMES
NET *35,274* START TIME END TIME

COMMENTS

RAW MATERIAL RECEIVING RECORD No 18385

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

09:11

TEXU2095811
SECTION 1

RECEIVED BY

MO

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

2/26/01 101209701 97482 Net 36376

SHIPPER

CARRIER

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1000	B/T	Warehouse	N/A	Disposal
75-100s @ 200Kg		Unit 5	2.4	DCA

COMMENTS

see Bill

SECTION 2

RECEIVED AT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

Benn: 792 9:25

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

PLANT WEIGHT

UNLOADING TIMES

NET 33.069 START TIME END TIME

COMMENTS

LSF Transportation Inc.

1534 Field Street • Hammond, IN 46320

Tel IN: 219-433-4252 • Tel IL: 773-374-6082 • Fax: 219-433-4256

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REMITTANCE COPY

PLEASE SHOW THIS PRO BILL IN
OR REFERENCE

DATE SHIPPED	REFERENCE/BL	TRAILER	ORIGIN	DEST.	ACCOUNT	BILLING DATE	PRO NO.
2/20/01	CONT# TEXU2095811	99942	IL	AR	RI-450N	2/23/01	59253

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EAVENTIS CROP SCIENCE
C/O CEDAR CHEMICAL CORP
49 PHILLIPS RD #311
HELENA AR 72342

FOR REF# 101207/01

BHX

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P
R800 LINE EAST YARD
9665 WEST LAWRENCE AVE
SCHILLER PARK IL 60176

BILL TO

RHONE POULENC AG
C/O FTS FREIGHT PAYMENT
PO BOX 1259
SOMERVILLE NJ 08876

PIECES	DESCRIPTION OF ARTICLES	WEIGHT	RATE	CHARGES
75	DICHLORANTILINE 2.4	36,376 LBS		
	IN CASE OF EMERGENCY...	LBS		
	CHEMTREC 800-424-...	LBS		
	HAZARDOUS MATERIAL	LBS		
30	USDOT; DICHLORANTILINE 2.4...	LBS		
	CLASS 6.1, UN1800	LBS		
	MARINE POLLUTANT	LBS		
	CONT# TEXU2095811	LBS		
	PU# E-6090	LBS		
	FUEL SURCHARGE	LBS		
155	TOTALS	36,376 LBS		

Freight charges due and payable within seven days after delivery of shipment.

MC 240911

US DOT 480588

FED. ID 35-1823666

SCAT CODE L8FR

AB0000028884

IP4

PRINT DATE 12/14/00 TIME 11:47:36

MEMPHIS, TN RICECO, LLC

ORDER ORDER
DATER NUMBER

** SHIPPING ORDER **

11/03/00 3110

SOLD TO:

AVENTIS CROPSCIENCE LTD
127/22-23 PANJATHANI TWR
17TH FLOOR NONSEE ROAD
CHONGNANSEE, YANNAWA
BANGKOK THAILAND 10120

REQ DELV DATE: 2/01/01
REQ SHIP DATE: 12/22/00

K. PAKORN

662-681-1125

SHIP TO:

AVENTIS CROPSCIENCE (THAI)
FL.17-18 PANJATHANI TOWER
127/22-23 NONSEE RD.
CHONGNONSEE YANNAWA
BANGKOK THAILAND 10120

CUST. NO.	CUST ORDER NO.	SALESMAN	FRT.PPD/COL
6000-00	22100020	R. VEGA	PREPAID

SHIPPED FROM	FOB POINT	SHIP VIA	TERMS
WEST HELENA PLANT	CIF BANGKOK	COMMON CARRIER	30 DAYS

QTY CONTAINER ITEM
ORDERED SIZE NUMBER DESCRIPTION

760 BAG 03060 FLAKE TECH 25 KG
E 19,000 KG OF PROPANIL TECHNICAL 97% IN 25 KG BAGS
E CIF BANGKOK
E ITEM NO: CNRAPRO95421
I MARKS: AVENTIS
I PROPANIL TECH
I BCL-221-00-020
I BATCH/LOT NO....
I BANGKOK
I LABELS: RICECO PROPANIL TECH (GENERAL LABELS)
I DARK COLOR MATERIAL REQUESTED

SHIP 12-19
8 AM

OK
LW
12.14
SHIP 12.20
red dot regular

GILSCOT GUIDROZ INTERNATIONAL INC
201 EVANS ROAD, SUITE 333
NEW ORLEANS, LA. 70123
PHONE: 504 731 1997 FAX: 1998
EMAIL: GILSCOT@BELLSOUTH.NET

BOOKING CONFIRMATION

DATE: 12-13-00

ATTN: RAFAEL VEGA, APRIL CARDENAS
CC: LISA WALKER CED AR

SHIPPER: RICECO
ORDER NO.: 3110
BOOKING NO. OWS1082620
PC. & WT: 1 X 40' FCL
COMMODITY: HERBICIDES NON HAZD
VESSEL: OOCL CALIFORNIA V.0476
CUTOFF DATE: 12-21
EST. SAIL DATE: 1-3
EST. E.T.A.: 1-27
STEAMSHIP LINE: P&O/OWL
PLACE RECEIPT: MARION AR
PORT OF LOADING: LONG BEACH, CA.
DESTINATION PORT: BANGKOK, THAILAND
RATE: \$1925.00
DELIVERY ADDRESS: GILSCOT C/O P&O C/O
U.P. RR., MARION AR

NOTES:

Good

*Change
Kestner*

STRAIGHT BILL OF LADING - SHORT FORM - Original - Not Negotiable

REV. A *TANK CARS ARE LOADED TO FULL
SHELL GALLONAGE CAPACITY

NAME OF CARRIER

Horizon Traveling

CARRIER'S NO. _____

RECEIVED, subject to the classification and tariff in effect on the date of the Bill of Lading

NOTE - Where the rate is dependent on value shippers are required to state specifically in writing the
agreed or declared value of the property
The agreed or declared value of the property is hereby specifically stated by the shipper to be exceedingThe property described below, in apparent good order except as noted (contents and condition of contents of packages
without) marked, damaged and described as indicated below which and cover (the word cover being understood
throughout this document to mean any person or corporation in possession of the property under the contract) agree to
carry to its usual place of delivery at said destination, if on its route otherwise to deliver to another carrier on the route to
said destination. It is mutually agreed as to each carrier of all or any of said property that every carrier to be performed
hereunder shall be subject to all the terms and conditions of the Uniform Customs Storage Bill of Lading set forth (1) in
Official Tariffs, Western and Illinois Freight Classifications in effect on the date hereof, if this is a rail or a road-water
shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.
Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the
back thereof set forth in the classification or tariff which govern the transportation of this shipment, and the said terms and
conditions are hereby agreed to by the shipper and accepted for himself and his agentsSubject to Section 7 of conditions of
applicable bill of lading, if this shipment
is to be delivered to the consignee with-
out recourse on the consignor, the con-
signor shall sign the following statement.
The carrier shall not make delivery of
this shipment without payment of freight
and all other lawful charges.

RICECO

Per _____
(Signature of consignor)

FROM:

RICECO
6100 POPLAR AVENUE
SUITE 2428
MEMPHIS, TN 38137FOR CHEMICAL EMERGENCY -
SPILL, LEAK, FIRE, EXPOSURE
OR ACCIDENT, CALL CHEMTREC -
DAY OR NIGHT 1-800-424-9300.If charges are to be prepaid,
write or stamp here, "To be
Prepaid." **PREPAID**Rec'd \$ _____ to
apply in prepayment of the
charges on the property
described hereon.

Agent or Cashier.

Per _____
(The signature here acknow-
ledges only the amount pre-
paid.)

Charges advanced:

\$ _____

SHIPPERS NUMBER

No - R - 0963

CONSIGNED TO (Mail or street address of consignee - For purposes of notification only.)

GILSCOT GUIDROZ
C/O P&O C/O UP RAILROAD
MARION, AR

*DELY. ADDRESS

COUNTY

D E S T I N A T I O N

SOLD TO:

aventis

CUSTOMER ORDER NO. 22100020	RICECO ORDER NO. 3110	DATE SHIPPED 12-20-00	BOOKING# OWS1082620
CAR VEHICLE INITIALS & NUMBER KNCU-429221-5	GROSS WT. 3060	TARE 44,080	NET WEIGHT POUNDS 41,800
(*To be filled in only when shipper desires and governing tariffs provide for delivery thereof.) ROUTING			

NUMBER &	TYPE OF PACKAGES	Check if haz- ardous material	Description of Articles, Special Marks & Exceptions	QUANTITY	BASIS	WEIGHTS
760	25 KG BAGS		CHEMICALS, N.O.I., PROPANIL TECHNICAL - FLAKED			55 LBS. NET EACH 58 LBS. GROSS EACH
SEAL#	13077		BOOKING# OWS1082620 STEAMSHIP LINE: P&O/OWL VESSEL: "OOCL CALIFORNIA V0475"			LOT# FL0002-01-68 FL09013-01-127 FL09022-02-154 FL09022-02-384 FL09022-01-22

*This is to certify that the above named articles are properly classified, described, packaged, marked and labeled and are
in proper condition for transportation according to the applicable regulations of the Department of Transportation.

RICECO

Per Brian Togni

Shipper _____ Agent

Per _____

The description and weight indicated
on this bill of lading are correct, subject
to verification by the Weighing and In-
spection Bureau having jurisdiction,
according to agreement.

RICECO

PER Brian Togni Shipper:

* Shipper's Imprint in lieu of stamp: not a part of bill of lading approved by the Interstate Commerce Commission.

CONTAINERS USED FOR THIS SHIPMENT ARE MARKED AS REQUIRED TO INDICATE COMPLIANCE WITH THE REQUIREMENTS OF THE GOVERNING RAIL OR MOTOR FREIGHT CLASSIFICATION

INITIAL NO.

+CAR SEAL

+DUNNAGE

ORDER BILLING DETAIL

Permanent post office address of shipper:

RICECO, 6100 POPLAR AVE., SUITE 2414, MEMPHIS, TN 38137

ORIGINAL

AB0000019446

From: Jim Krusling <krusling@cvrtmail.com>
To: lwalker@cvrtmail.com <lwalker@cvrtmail.com>
Date: Thursday, November 16, 2000 9:59 AM
Subject: Drum Liner

Bob Martin
501-945-5452
800-726-7465

Lisa,

I think this is the drum liner. Does it make any sense to you?

Jim

>From: Cedar Chemical Corporation <jmancini@cvrtmail.com>
>To: "Krusling@cvrtmail.com" <Krusling@cvrtmail.com>
>Subject: FW: supersack: replace the previous message
>Date: Thu, 16 Nov 2000 15:29:29 -0600

>
>
>

>-----Original Message-----

>From: Serge.Ravet@aventis.com [SMTP:Serge.Ravet@aventis.com]
>Sent: Thursday, November 16, 2000 2:51 PM
>To: jmancini@cvrtmail.com
>Cc: Dan.Stahl@aventis.com
>Subject: supersack: replace the previous message

>

>Joe,

>I think there are the data you were looking for, just received from
>Degussa, and so far we need to keep the same packaging:
>As already mentioned, CS-DCA is in accordance to Dangerous Goods
>Regulation for shipments (ADR) with trucks. To meet the ADR for
>shipments, it is sufficient to fill CS - DCA e.g. in PE-drums with
>UN-classification.
>To get higher security for handling, shipments and storing we fill
>Cyclanilide in two PE-bags (one into another) with 50 kgs/net. These bags
>will be put into the PE-drum.
>From our department, which is responsible for purchasing of these bags, I

>received following specification:

>Dimension: 510mm x 510 mm x 1400 mm x 0,1 mm
>Material: PE-bag, welded
>Volume: 100 L
>Colour: transparent

>

>

>best regards
>serge ravet

millimeter = 39,37007874 mil 20 x 20 x 55
1 mil thick

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Note: This page will perform a maximum of 65 measurement conversions, whereas your current input would require 121 conversions. Try either increasing the "Increment number by" or decreasing the "End with number".

Conversion Table	
millimeter	mil
0.1	3.93700787401575
1.1	43.3070866141732
2.1	82.6771653543307
3.1	122.047244094488
4.1	161.417322834646
5.1	200.787401574803
6.1	240.157480314961
7.1	279.527559055118
8.1	318.897637795276
9.1	358.267716535433
10.1	397.637795275591
11.1	437.007874015748
12.1	476.377952755905
13.1	515.748031496063
14.1	555.11811023622
15.1	594.488188976378
16.1	633.858267716536
17.1	673.228346456693
18.1	712.59842519685
19.1	751.968503937008
20.1	791.338582677166
21.1	830.708661417323
22.1	870.07874015748
23.1	909.448818897638
24.1	948.818897637795
25.1	988.188976377953
26.1	1027.55905511811
27.1	1066.92913385827
28.1	1106.29921259843
29.1	1145.66929133858
30.1	1185.03937007874
31.1	1224.4094488189
32.1	1263.77952755906
33.1	1303.14960629921
34.1	1342.51968503937
35.1	1381.88976377953
36.1	1421.25984251968
37.1	1460.62992125984
38.1	1500
39.1	1539.37007874016
40.1	1578.74015748032
41.1	1618.11023622047
42.1	1657.48031496063
43.1	1696.85039370079
44.1	1736.22047244094
45.1	1775.5905511811
46.1	1814.96062992126
47.1	1854.33070866142
48.1	1893.70078740157
49.1	1933.07086614173
50.1	1972.44094488189
51.1	2011.81102362205
52.1	2051.1811023622

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[Conv. & Calc. Home](#) --> [Measurement Conversion](#)

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Conversion Table

mm	in
0	0.000
1	0.039
2	0.079
3	0.118
4	0.157
5	0.197
6	0.236
7	0.276
8	0.315
9	0.354
10	0.394
11	0.433
12	0.472
13	0.512
14	0.551
15	0.591
16	0.630
17	0.669
18	0.709
19	0.748
20	0.787
21	0.827
22	0.866
23	0.906
24	0.945
25	0.984
26	1.024

Legend:

mm = millimeter

in = inch

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53.1	2090.55118110236
54.1	2129.92125984252
55.1	2169.29133858268
56.1	2208.66141732284
57.1	2248.03149606299
58.1	2287.40157480315
59.1	2326.77165354331
60.1	2366.14173228346
61.1	2405.51181102362
62.1	2444.88188976378
63.1	2484.25196850394
64.1	2523.62204724409

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FLOW DIAGRAM LINE SYMBOLS



NO	SERVICES	DATE	SP	CHG	PR
1					
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EQ. NO. P-5217
TITLE WATER PUMP
TYPE CENTRIFUGAL
VENDOR DURCO
MATL 316 SS
SIZE 3x1.5x10
HP 5 HP
RPM 1750
CAPACITY 50 GPM
TEMP
PRES.

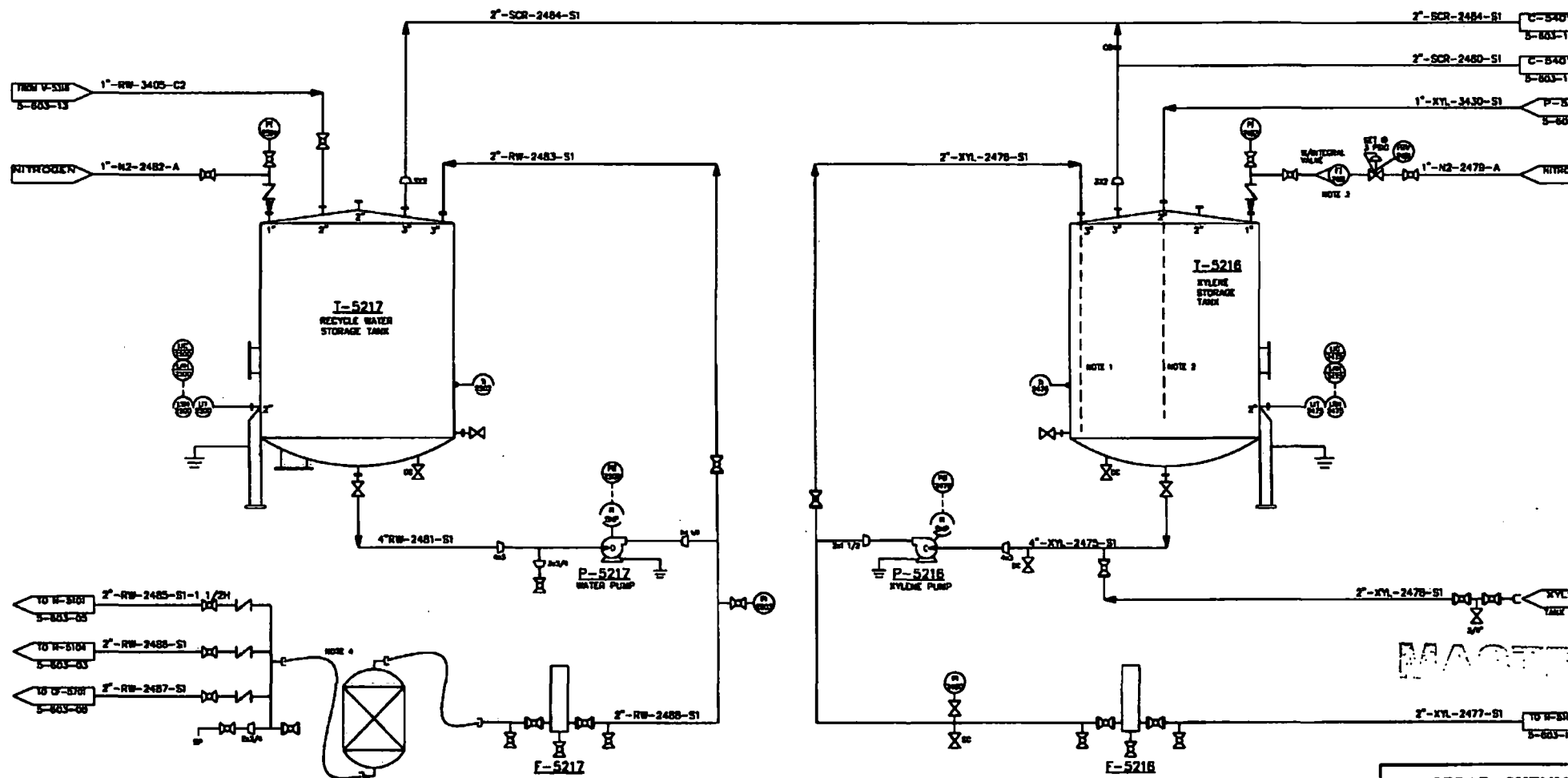
EQ. NO. F-5217
TITLE RECYCLED WATER FILTER
TYPE CARTRIDGE (5 MICRON P.P.)
VENDOR
MATL 316 SS
SIZE 2x2
HP
RPM
CAPACITY
TEMP
PRES.

EQ. NO. T-5217
TITLE XYLENE HOLD TANK
TYPE VERTICAL
VENDOR
MATL 316SS
SIZE 9'-0" O.D. x 38'-8" T/T
HP
RPM
CAPACITY 12,000 GAL
TEMP
PRES.

EQ. NO. P-5218
TITLE XYLENE PUMP
TYPE CENTRIFUGAL
VENDOR CHESTERTON
MATL 316 SS
SIZE 3x1.5x10
HP 5 HP
RPM 1750
CAPACITY 50 GPM
TEMP
PRES.

EQ. NO. T-5216
TITLE RECYCLE WATER STORAGE TANK
TYPE VERTICAL
VENDOR
MATL 316SS
SIZE 9'-0" O.D. x 38'-8" T/T
HP
RPM
CAPACITY 12,000 GAL
TEMP
PRES.

EQ. NO. F-5216
TITLE XYLENE FILTER
TYPE CARTRIDGE (5 MICRON PARKER FULFLO)
VENDOR
MATL 316SS
SIZE 2" x 2" INLET/OUTLET
HP
RPM
CAPACITY
TEMP AMBIENT
PRES.



- NOTES:
1. 2" DIP PIPE WITH 1/4" ANTI-SIPHON HOLE (REMOVABLE).
2. 1" DIP PIPE WITH 1/4" ANTI-SIPHON HOLE (REMOVABLE).
3. ACCESSIBLE FROM GRADE
4. LEASED CARBON ABSORBER

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CEDAR CHEMICAL CORPORATION

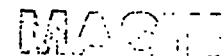
WEST HAVEN, CONNECTICUT

UNIT 5

AVANTIS CYCLANILIDE
PIPING & INSTRUMENTATION
WATER & XYLENE STORAGE

DATE: NONE
REV: 5-603-01

EQ. NO.	V-5307
TYPE	VESSEL
NAME	◇
VENDOR	◇
MATL	304SS
SIZE	3'DxJ'4"H
HP	N/A
RPM	N/A
CAPACITY	200 GAL
TEMP	
PRES.	



CEDAR CHEMICAL CORPORATION	
WEST HELDIA, ARIZONA	
UNIT FIVE	
AVENTIS CYCLANILIDE PIPING & INSTRUMENTATION O SODIUM METHOXIDE STORAGE	
WALL	5-803-02

EQ. NO. C-5104
TYPE VERTICAL
NAME COUPLING COLUMN
MATERIAL 316 SS
SIZE 23.5" DIA x 7'-5 1/2"
HP
RPM
CAPACITY
TEMP
PRES.

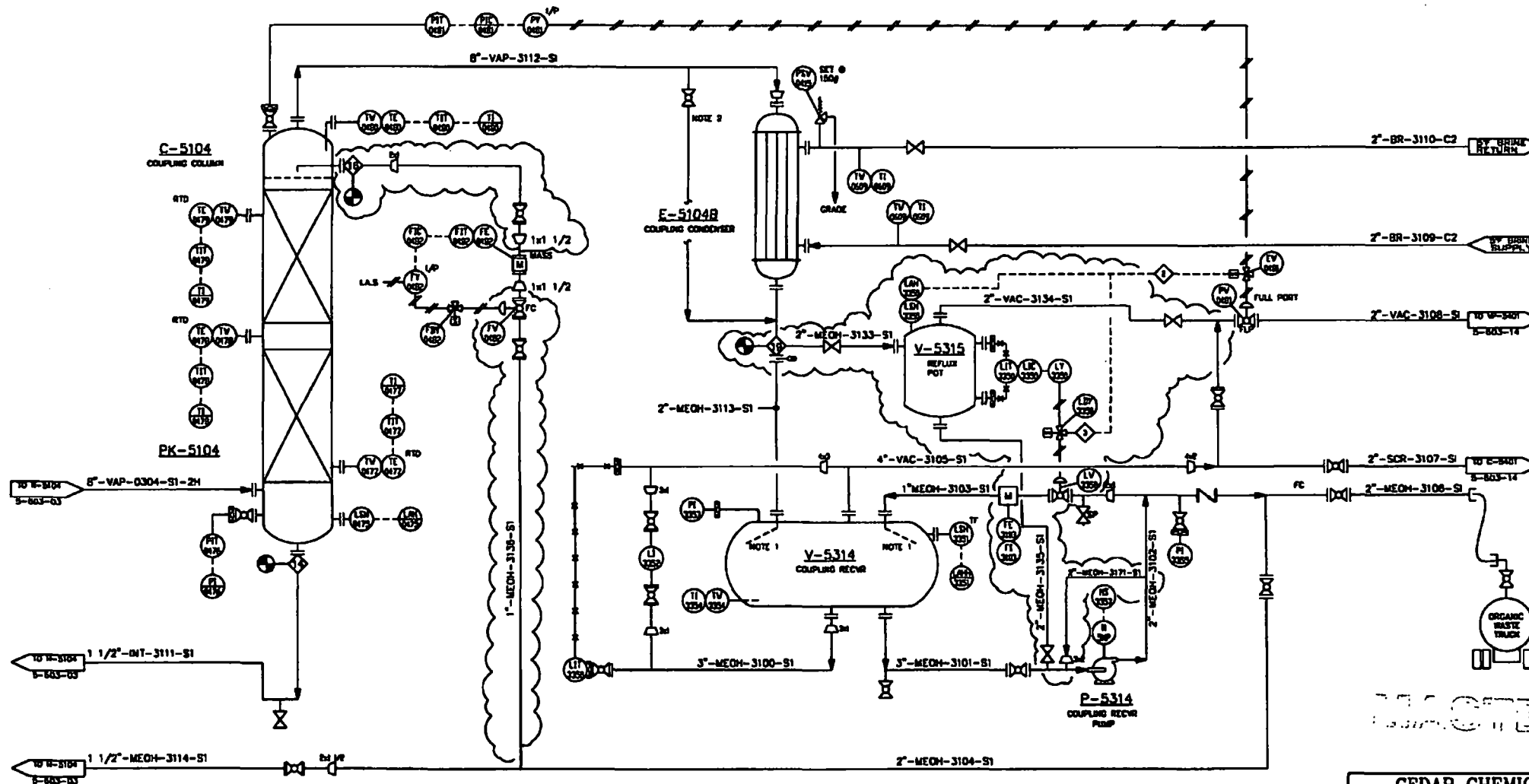
EQ. NO. PK-5104
TYPE 1T STRUCTURED
NAME COUPLING COLUMN PACKING
MATERIAL 304L SS
SIZE
HP
RPM
MM BTUN
TEMP
PRES.

EQ. NO. E-5104B
TYPE SHELL/TUBE
NAME COUPLING CONDENSER
MATERIAL SS/SS
SIZE
HP
RPM
CAPACITY
TEMP
PRES.

EQ. NO. V-5314
TYPE VERTICAL
NAME COUPLING RECEIVER
MATERIAL 316 SS
SIZE
HP
RPM
CAPACITY 500 GAL
TEMP
PRES. 30 PSIG/TV

EQ. NO. P-5314
TYPE CENTRIFUGAL
NAME COUPLING RECVR PUMP
MATERIAL 316 SS
SIZE 2x1x10A
HP
RPM
CAPACITY 40 GPM
TEMP
PRES. 80 FT

EQ. NO. V-5315
TYPE CATCH TANK
NAME REFLUX POT
MATERIAL CS
SIZE 1'-8" DIA x 2'
HP
RPM
CAPACITY 70 GAL
TEMP
PRES.



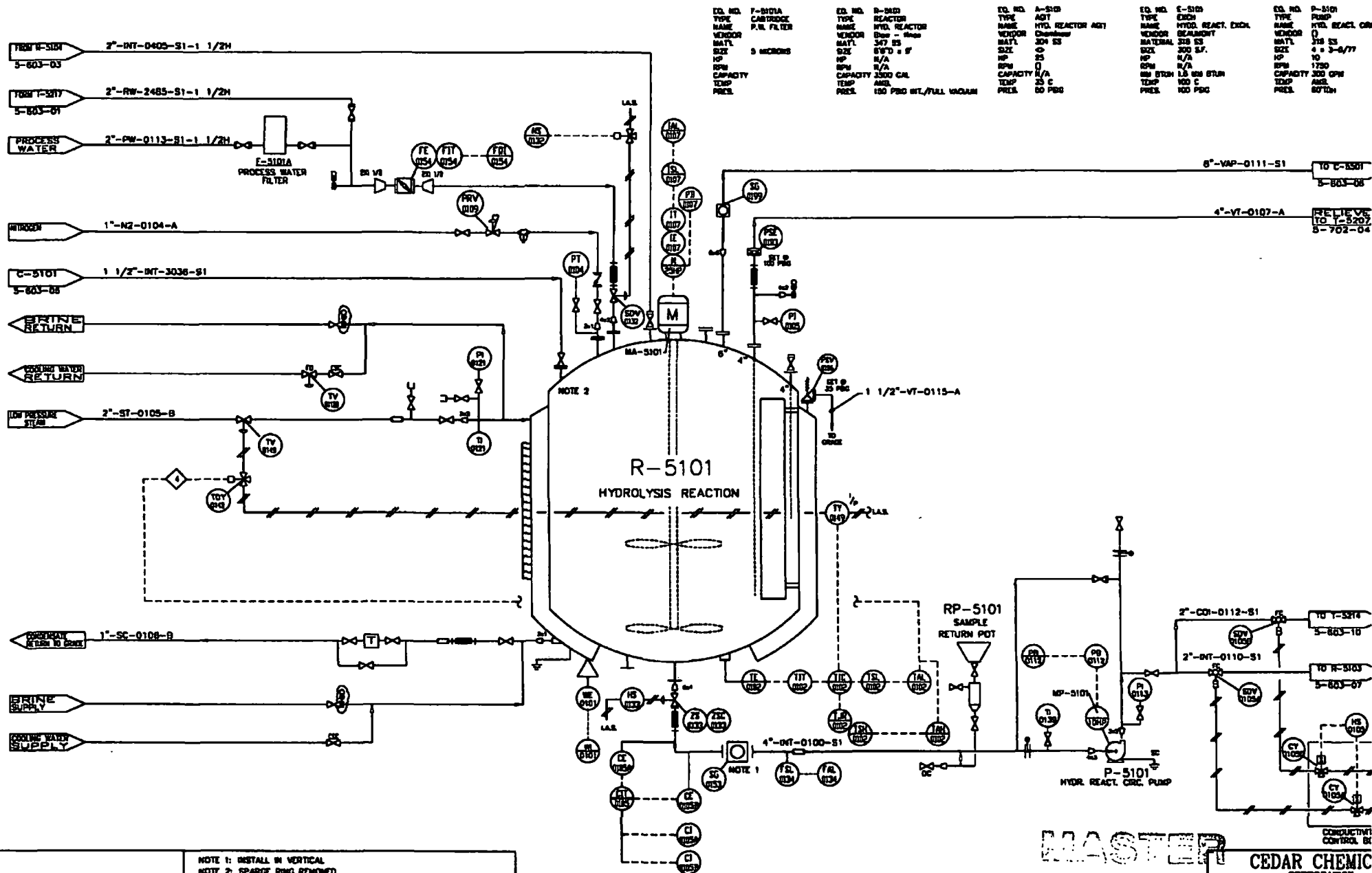
- NOTES:
1. INSTALL 45° SPLASH LEG DIRECTING FLOW AGAINST VESSEL WALL
2. LOW POINT DRAIN

- INTERLOCK LOGIC:
2. PV-0481 CLOSING ON HIGH LEVEL
3. FV-3350 OPENING ON HIGH LEVEL

NO.	REVISIONS	DATE	BY	CHKD	APPD
1	AS BUILT	10/01/00	ALM	JL	
2	GENERAL REVISIONS	11/20/00	ALM	MBT	
3	GENERAL REVISIONS	10/18/00	ALM	MBT	
4	GENERAL REVISIONS	8/20/00	TCC		
5	FOR ENGINEERING	6/16/00	TCC	MBT	MBT

NO. 50	DATE 8/22/00
NO. 50	DATE 8/22/00
NO. 50	DATE 8/22/00
NO. 50	DATE 8/22/00
NO. 50	DATE 8/22/00

CEDAR CHEMICAL CORPORATION	
WEST MELBOURNE, ARIZONA	
UNIT FIVE	
AVENTIS CYCLANILIDE PIPING & INSTRUMENTATION I COUPLING DISTILLATION	
NO. 50	DATE 8/22/00
NO. 50	DATE 8/22/00
NO. 50	DATE 8/22/00
NO. 50	DATE 8/22/00
NO. 50	DATE 8/22/00



EQ. NO.	F-5101A	EQ. NO.	B-5101	EQ. NO.	A-5101	EQ. NO.	C-5101	EQ. NO.	P-5101
TYPE	CARBON	TYPE	HYD. REACTOR	TYPE	HYD. REACTOR AGT	TYPE	EXCH.	TYPE	HYD. REACT. CTR
NAME	P.W. FILTER	NAME	HYD. REACTOR	NAME	Chromium	NAME	SEALWATER	NAME	HYD. REACT. CTR
MATL.	316 SS	MATL.	316 SS	MATL.	316 SS	MATL.	316 SS	MATL.	316 SS
SIZE	3 MICRONS	SIZE	8'0" x 8'	SIZE	25	SIZE	25	SIZE	4 x 3-6/77
HP	N/A	HP	N/A	HP	N/A	HP	N/A	HP	10
RPM	N/A	RPM	N/A	RPM	N/A	RPM	N/A	RPM	1750
CAPACITY	3500 GAL	CAPACITY	N/A	CAPACITY	N/A	WGT. STN.	1.5 WGT. STN.	CAPACITY	300 GPM
TEMP.	AMBI.	TEMP.	AMBI.	TEMP.	25 C	TEMP.	100 C	TEMP.	AMBI.
PRESS.		PRESS.	150 PSIG WT./FULL VACUUM	PRESS.	50 PSIG	PRESS.	100 PSIG	PRESS.	BOTTOM

INTERLOCK LOGIC:

4. TV-0149 SHUTS ON HIGH TEMP

NO.	REVISIONS	DATE	BY	CHKD	APPROV.	DATE	BY	CHKD	APPROV.
1	AS BUILT	11/2/80	ALB	MSF		11/2/80	ALB	MSF	
2	GENERAL REVISIONS	11/2/80	ALB	MSF		11/2/80	ALB	MSF	
3	GENERAL REVISIONS	11/2/80	ALB	MSF		11/2/80	ALB	MSF	
4	FOR ENGINEERING	11/2/80	ALB	MSF		11/2/80	ALB	MSF	

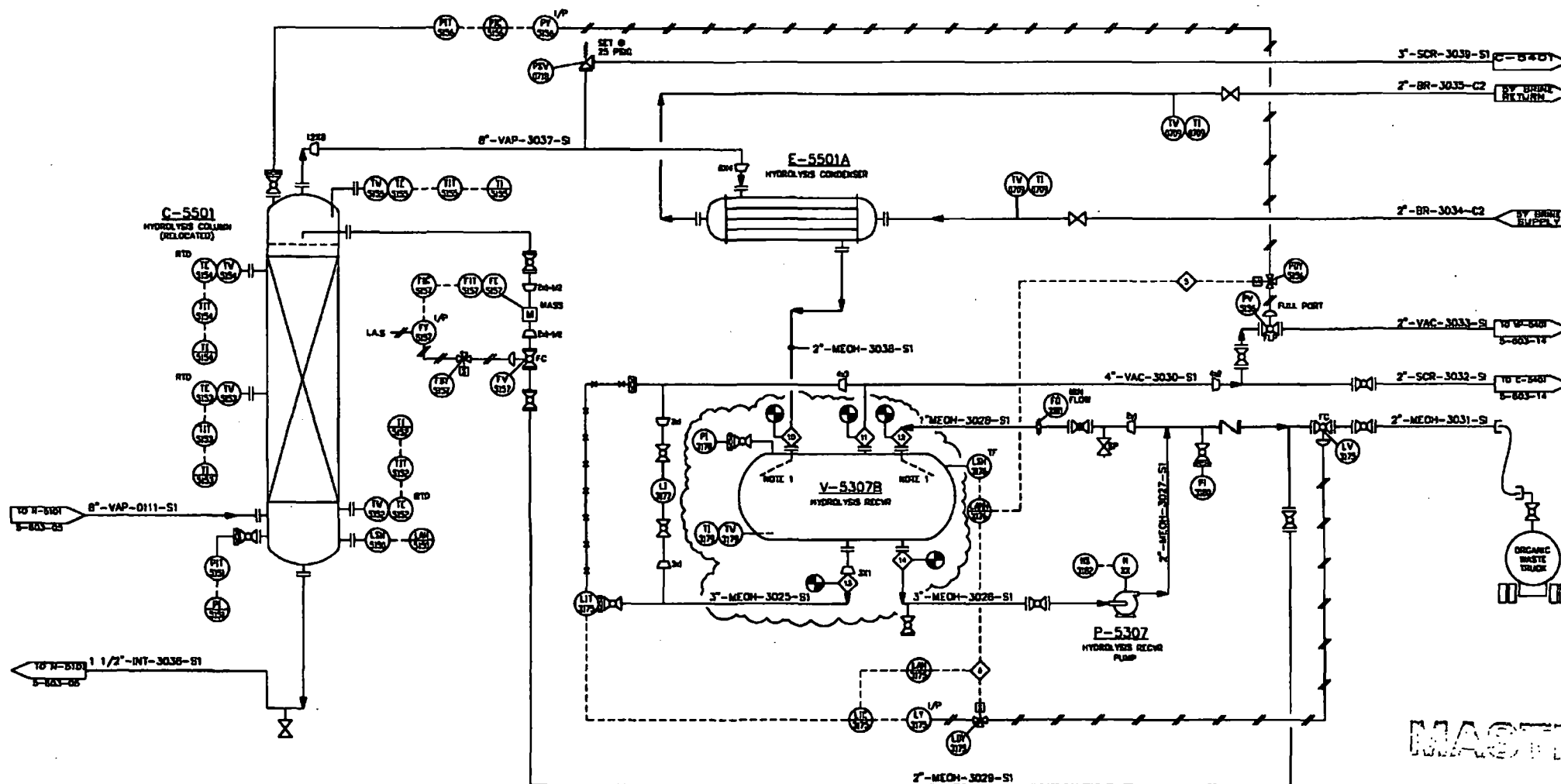
MASTER
CEDAR CHEMICAL CORPORATION
WEST MOLENA, ARIZONA
UNIT FIVE
AVENTIS CYCLANILIDI
PIPING & INSTRUMENTATION C
HYDROLYSIS REACTOR
REVISION
NONE
5-603-05

EQ. NO. C-5501
TYPE VERTICAL
NAME HYDROLYSIS COLUMN
VENDOR
MATL SS
SIZE
HP
RPM
CAPACITY
TEMP
PRES.

EQ. NO. E-5501A
TYPE SHELL/TUBE
NAME HYDROLYSIS CONDENSER
VENDOR
MATL SS/SS
SIZE 140 SQ. FT.
HP
RPM
CAPACITY
TEMP
PRES.

EQ. NO. V-5307B
TYPE VERTICAL
NAME HYDROLYSIS RECVR
VENDOR
MATL 316L SS
SIZE
HP
RPM
CAPACITY 70 GAL
TEMP 300°F
PRES. 25 PSIG/TV

EQ. NO. P-5307
TYPE CENTRIFUGAL
NAME HYDROLYSIS RECVR PUMP
VENDOR CHESTERTON
MATL 316 SS
SIZE 3x1 1/2x10
HP 7 1/2
RPM 1750
CAPACITY 50 GPM
TEMP 120°F
PRES. 100 FT



NOTES:
1. INSTALL 45° SPLASH LEG DIRECTING FLOW AGAINST VESSEL WALL.

INTERLOCK LOGIC:
5. PV-5156 CLOSURES ON HIGH LEVEL.
6. LV-3175 OPENS ON HIGH LEVEL.

NO.	REVISIONS	DATE	BY	CHKD	APPRD
1	GENERAL REVISION	10/24/79	ALM	JK	
2	AS BUILT	11/20/82	ALM	MBT	
3	GENERAL REVISION	10/18/83	ALM	MBT	
4	GENERAL REVISION	8/18/88	TSC		
5	FOR ENGINEERING	8/18/88	TSC	MBT	

CEDAR CHEMIC CORPORATION
WEST HOLM, ARIZONA

UNIT FIVE

AVENTIS CYCLANILIDE PIPING & INSTRUMENTATION 0 HYDROLYSIS DISTILLATION

DATE: NONE
REV: 5-603-06

EQ. NO. P-5103B
TYPE DIAPHRAGM PUMP
NAME F.A. PUMP
VENDOR WELDEN
MATL. \circ
SIZE \circ
HP \circ
RPM \circ
CAPACITY \circ
TEMP \circ
PRES. \circ

EQ. NO. R-5103
TYPE REACTOR
NAME PRECIPITATION
VENDOR \circ
MATL. GLS
SIZE 8'0" x 8'
HP N/A
RPM N/A
CAPACITY 3000 GAL
TEMP 80 C
PRES. ATM

EQ. NO. A-5103
TYPE AGT
NAME PRECIPITATION
VENDOR \circ
MATL. 316 SS
SIZE \circ
HP \circ
RPM \circ
CAPACITY N/A
TEMP 60 C
PRES. ATM

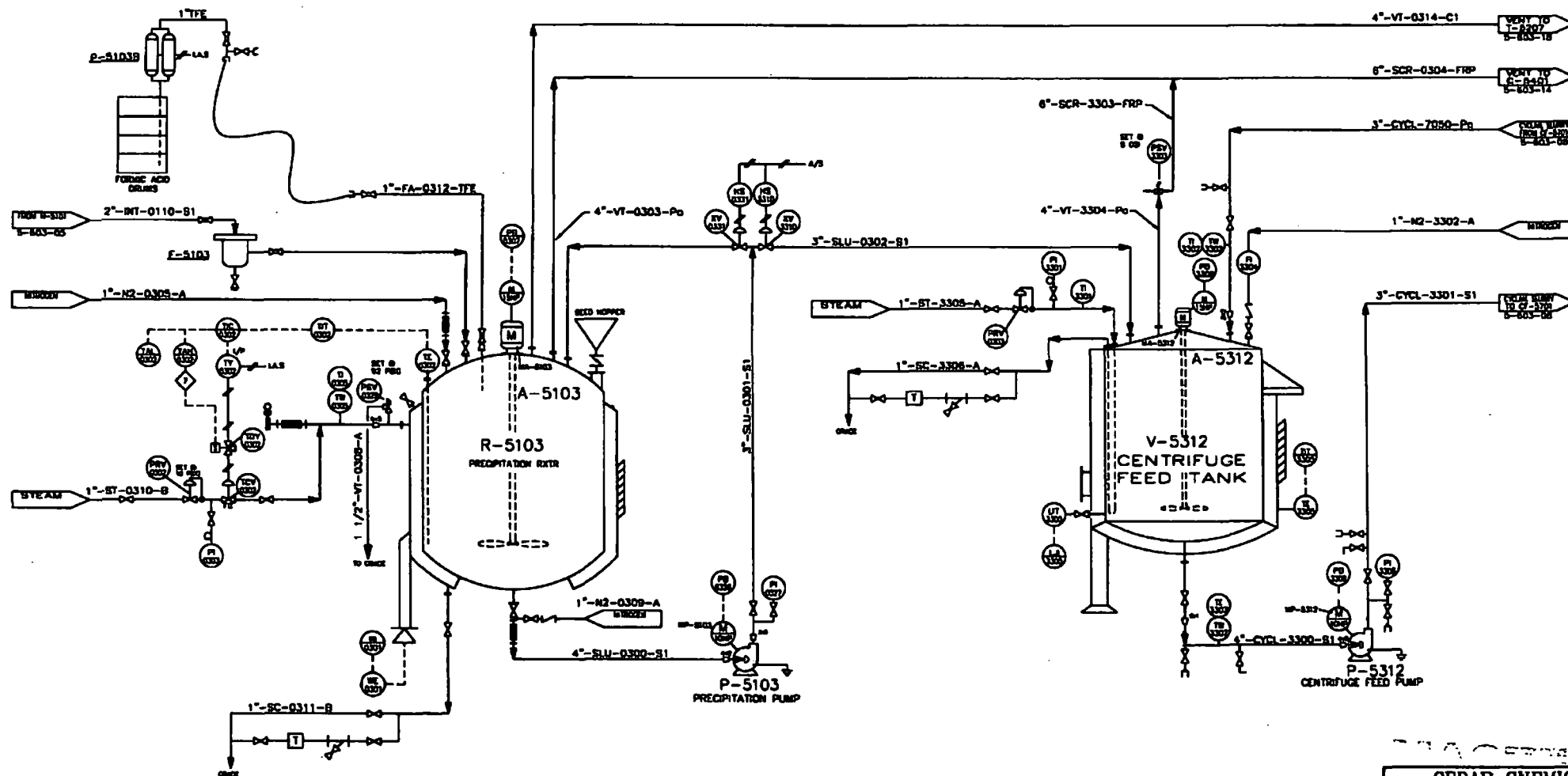
EQ. NO. P-5103
TYPE SLURRY PUMP
NAME PRECIPITATION PUMP
VENDOR DURCO
MATL. 316 SS
SIZE 2 x 2R-10/70
HP 10
RPM 1750
CAPACITY 200 GPM
TEMP 10 C
PRES. 65' TDH

EQ. NO. F-5103
TYPE BAG FILTER
NAME FILTER
VENDOR \circ
MATL. 316 SS
SIZE 200 MICRON
HP N/A
RPM N/A
CAPACITY \circ
TEMP \circ
PRES. \circ

EQ. NO. V-5312
TYPE TANK
NAME CENTRIFUGE FEED TANK
VENDOR \circ
MATL. SS
SIZE 9'0" x 9'-3"
HP N/A
RPM N/A
CAPACITY 5000 GAL
TEMP 10 C
PRES. ATM

EQ. NO. P-5312
TYPE PUMP
NAME CENTRIFUGE FEED PUMP
VENDOR DURCO
MATL. 316 SS
SIZE 2 x 2R-10/80
HP 10
RPM 1750
CAPACITY 200 GPM
TEMP 10 C
PRES. 50' TDH

EQ. NO. A-5312
TYPE AGT
NAME CENTR. 7
VENDOR \circ
MATL. 316 SS
SIZE \circ
HP \circ
RPM \circ
CAPACITY N/A
TEMP 10 C
PRES. ATM



INTERLOC LOGIC
7. TOP-0302 CLOSING ON HIGH TEMP

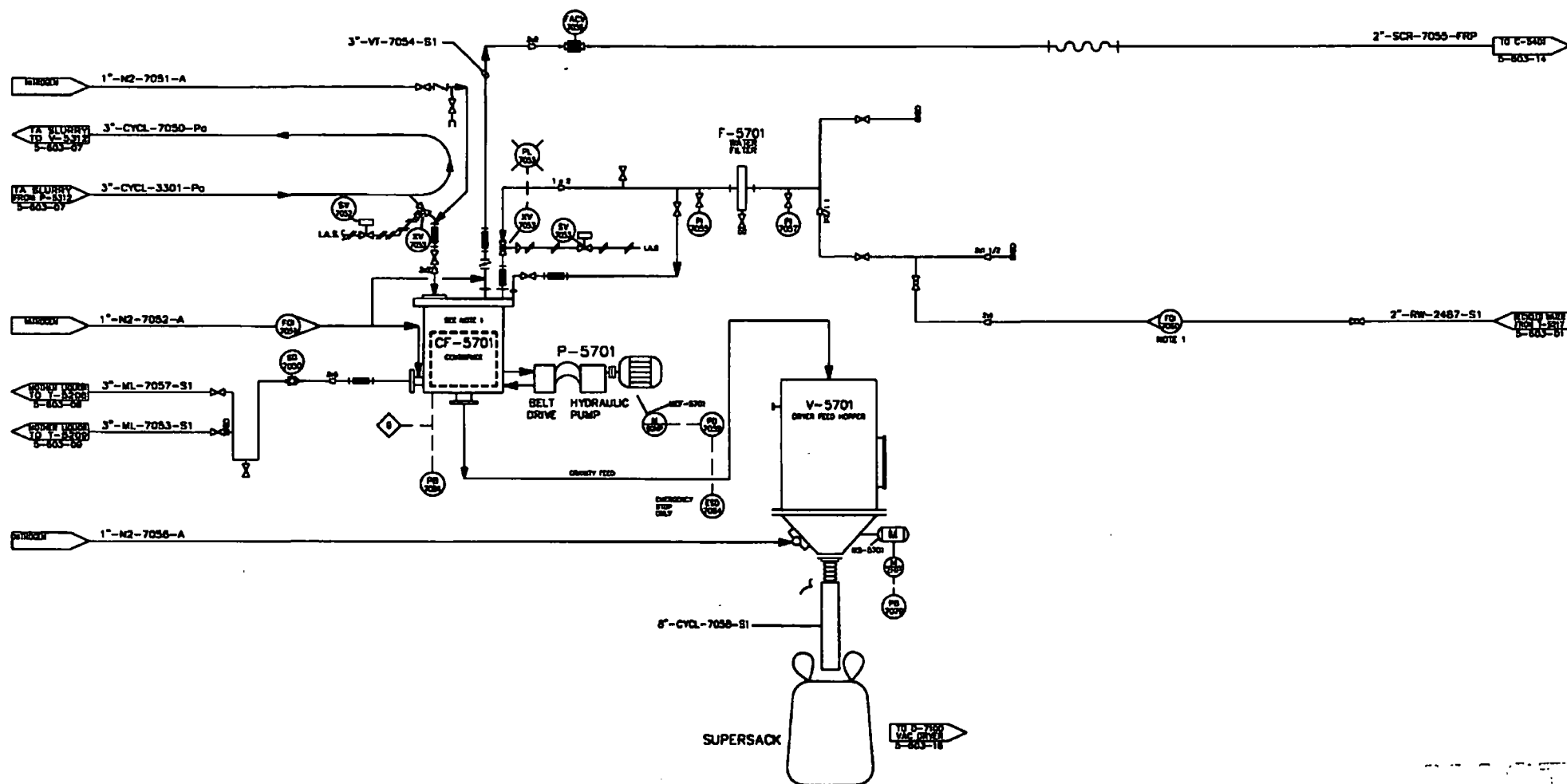
REVISIONS				DATE			
AS BUILT				11/25/00	ALM	MSF	
GENERAL REVISIONS				10/18/00	ALM	MSF	
GENERAL REVISIONS				5/5/00	TCC	MSF	
FOR ENGINEERING				8/8/00	TCC	MSF	

CEDAR CHEM CO.	
CORPORATION	
WEST HELDIA, ARIZONA	
UNIT FIVE	
AVENTIS CYCLANILIDE	
PIPING & INSTRUMENTATION	
PRECIPITATION & CF FEED	
SCALE	NONE
DATE	5-803-07

EQ. NO. CF-5701
TYPE CENTRIFUGE
NAME SHARPLES
VENDOR 304 SS
MATL 48" x 30"
SIZE 80
HP 800
RPM 800
CAPACITY 16 CU. FT.
TEMP 10 C
PRES. ATM

EQ. NO. F-5701
TYPE CARTRIDGE
NAME WATER FILTER
VENDOR COMMERCIAL FILTERS
MATL FULFLO MODEL 855820-3/4SD
SIZE 3" DIA x 25"
HP N/A
RPM N/A
CAPACITY <
TEMP 175 PSI @ 200 F
PRES. 150 PSI @ 250 F

EQ. NO. V-5701
TYPE HOPPER
NAME DRYER FEED HOPPER
VENDOR 304 SS
MATL 30" x 4"
SIZE 2
HP N/A
RPM N/A
CAPACITY 25 CU. FT.
TEMP AMB.
PRES. ATM



INTERLOCK LOGIC

6) CF-5701 WILL SHUT DOWN WHEN OUT OF BALANCE.

NOTE:

1. ACCESSIBLE FROM CENTRIFUGE

NO.	REVISIONS	DATE	BY	CHKD	APPROV
1	AS BUILT	11/20/93	ALM	MRP	
2	GENERAL REVISIONS	10/18/95	ALM	MRP	
3	GENERAL REVISIONS	6/19/99	JPS		
4	FOR ENGINEERING	6/6/00	TDC	MRP	MRP

DATE	TIME	DATE	TIME
6/6/00	10:00	6/6/00	10:00
6/6/00	10:00	6/6/00	10:00
6/6/00	10:00	6/6/00	10:00

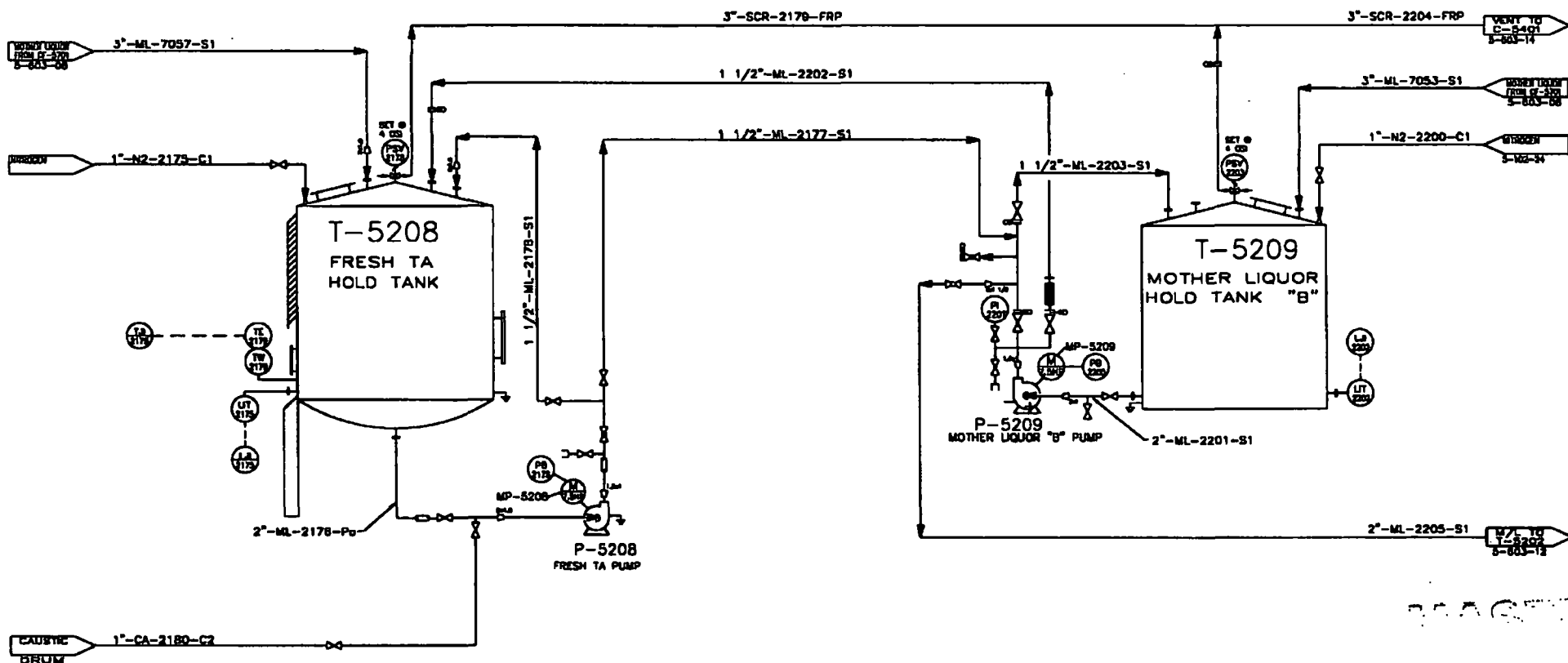
CEDAR CHEMIC CORPORATION	
WEST MELINA, ARIZONA	
UNIT FIVE	
AVENTIS CYCLANILIDE PIPING & INSTRUMENTATION D CENTRIFUGATION, DRYING, AND	
DATE	NO.
NONE	5-803-08

EQ. NO. T-5208
TYPE TANK
NAME FRESH TA HOLD
VENDOR O
MATL 316 SS
SIZE 9'0" x 9'
HP N/A
RPM N/A
CAPACITY 4000 GAL
TEMP 60 C
PRES. ATM

EQ. NO. P-5208
TYPE PUMP
NAME FRESH TA
VENDOR DURCO
MATL 316 SS
SIZE 1.5 x 1-8/70
HP 7.5
RPM 3500
CAPACITY 10 GPM
TEMP 60 C
PRES. 200 TON

EQ. NO. T-5209
TYPE TANK
NAME MOTHER LIQUOR HOLD
VENDOR O
MATL 304 SS
SIZE 7'-0"0" x 14'-0"
HP N/A
RPM N/A
CAPACITY 4000 GAL
TEMP AMS
PRES. ATM

EQ. NO. P-5209
TYPE PUMP
NAME MOTHER LIQUOR
VENDOR DURCO
MATL 316 SS
SIZE 1.5 x 1-8/74
HP 7.5
RPM 1750
CAPACITY 10 GPM
TEMP AMS
PRES. 60 TON



30 AUG 1978

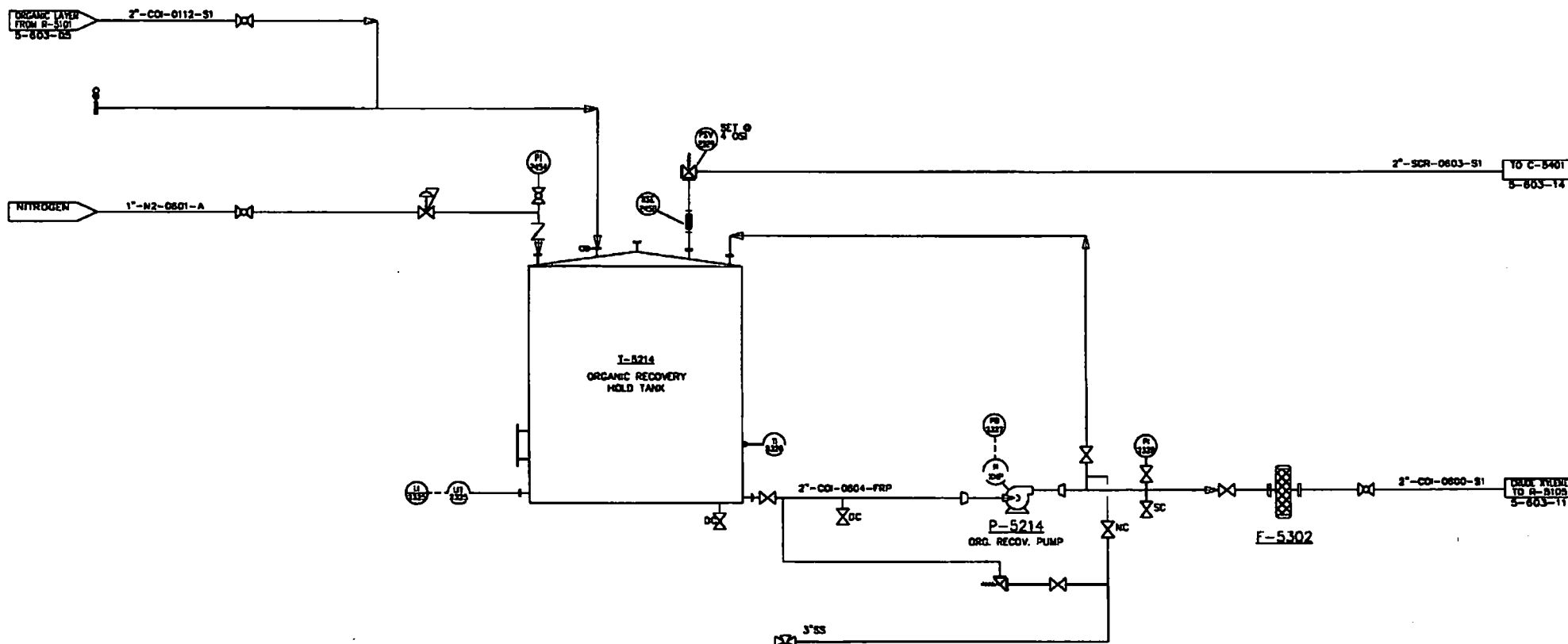
CEDAR CHEMIC/ CORPORATION WICKT HOLLOW, ARIZONA	
UNIT FIVE	
AVENTIS CYCLANILIDE PIPING & INSTRUMENTATION OF FRESH TA & MOTHER LIQUOR	
DATE	5-603-09

NO.	REVISIONS	DATE	BY	CHKD	APPD	THIS DRAWING AND THE INFORMATION IT CONTAINS ARE THE PROPERTY OF CEDAR CHEMIC, CORPORATION
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4	GENERAL REVISION	10/25/78	ALM	JK		
5	AS BUILT	11/20/78	ALM	JK		
6	GENERAL REVISION	10/18/78	ALM	JK		
7	GENERAL REVISION	8/10/78	TDG			
8	FOR ENGINEERING	5/6/78	TDG	MDP	MDP	

EQ. NO. T-5214
 TITLE ORG. RECOV. HOLD TANK
 TYPE VERTICAL
 VENDOR CS LINED
 MAT'L CS
 SIZE 100"
 HP 100
 RPM 1,800
 CAPACITY 17,000 GAL
 TEMP 100° F
 PRES. 100' TDH

EQ. NO. P-5214
 TITLE ORG. RECOV. PUMP
 TYPE CENTRIFUGAL
 VENDOR CURCO MARK II
 MAT'L 316 SS
 SIZE 3 X 1.5 - 8
 HP 100
 RPM 1,800
 CAPACITY 140 GPM
 TEMP 100° F
 PRES. 100' TDH

EQ. NO. F-5302
 TITLE ORG. RECOV. PUMP
 TYPE CARTRIDGE
 VENDOR BARTORUS
 MAT'L 316 SS
 SIZE 100 MICRON
 HP 100
 RPM 1,800
 CAPACITY 140 GPM
 TEMP 100° F
 PRES. 100' TDH



NO.	REVISIONS	DATE	BY	CHKD	APPROV	THIS DRAWING AND THE INFORMATION IT CONTAINS ARE THE PROPERTY OF CEDAR CHEMICAL COMPANY.
1	AS SHOWN	11/20/00	ALM	REF		
2	GENERAL REVISION	10/19/00	ALM	REF		
3	GENERAL REVISIONS	9/19/00	100			
4	FOR CONSTRUCTION	8/9/00	100	REF	APR	

CEDAR CHEMICAL CORPORATION WEST MELDEN, ARIZONA	
UNIT 5	
AVENTIS CYCLANILIDE PIPING & INSTRUMENTATION OF ORGANIC RECOVERY STORAGE	
SCALE	NONE
REV	5-803-10

EQ. NO. P-5105
TYPE PUMP
NAME SOLV. REC. WASTE PUMP
VENDOR DURCO
MATL 316 SS
SIZE 3 x 1.5-8/74
HP 3
RPM 1750
CAPACITY 100 GPM
TEMP 100 C
PRES. 50' TDH

EQ. NO. R-5105
TYPE REACT
NAME SOLV. REC. POT
VENDOR O
MATL QLS
SIZE 9'-0" x 9'-3"
HP N/A
RPM N/A
CAPACITY 4000 GAL
TEMP 100 C
PRES. ATM

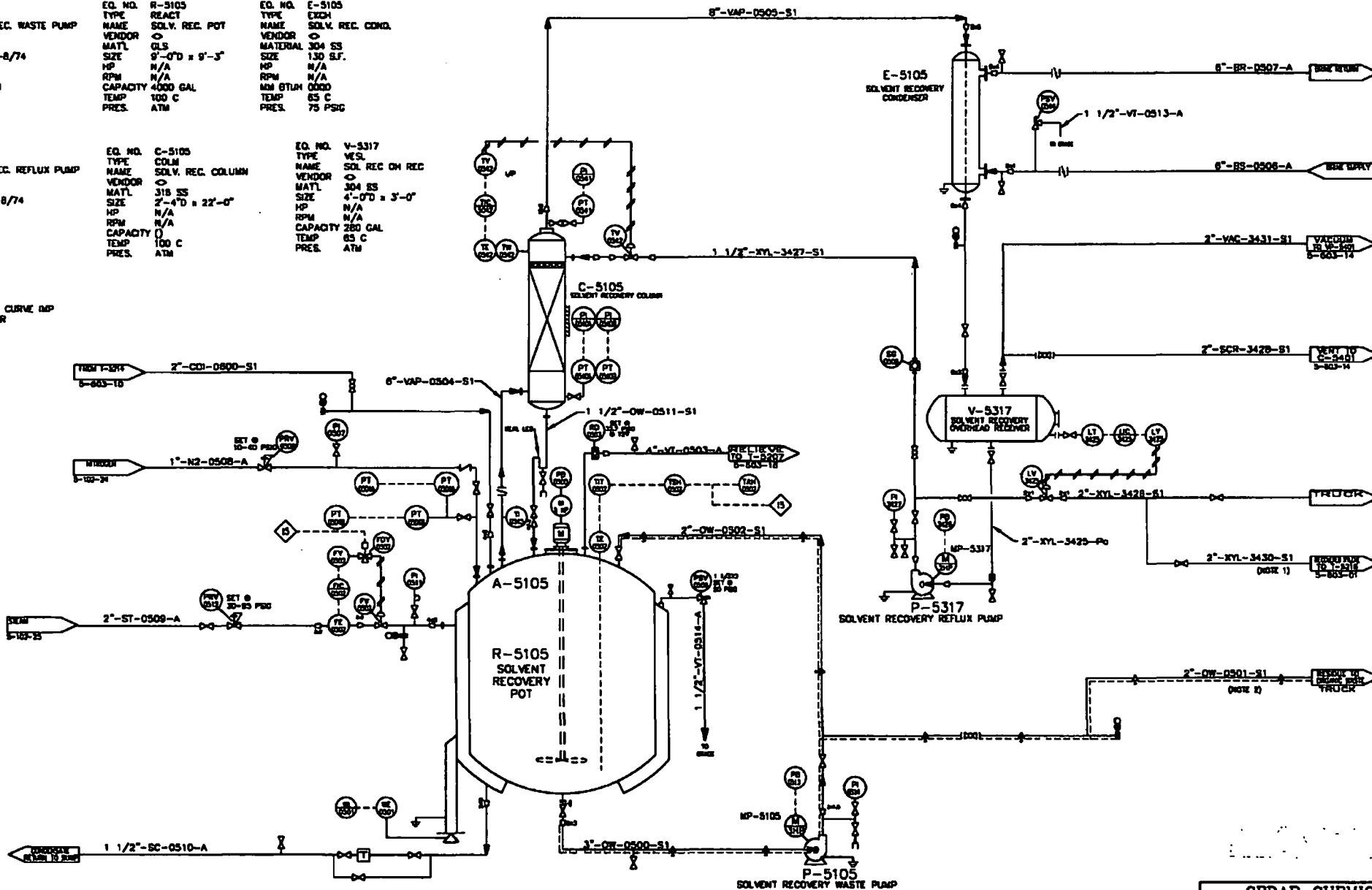
EQ. NO. E-5105
TYPE EXCH
NAME SOLV. REC. COND.
VENDOR O
MATL 304 SS
SIZE 130 S.F.
HP N/A
RPM N/A
NM BTUH 0000
TEMP 65 C
PRES. 75 PSIG

EQ. NO. P-5317
TYPE PUMP
NAME SOLV. REC. REFLUX PUMP
VENDOR DURCO
MATL 316 SS
SIZE 1.5 x 1-8/74
HP 2
RPM 1750
CAPACITY 20 GPM
TEMP 50 C
PRES. 50' TDH

EQ. NO. C-5105
TYPE COLM
NAME SOLV. REC. COLUMN
VENDOR O
MATL 316 SS
SIZE 2'-4" x 2'-0"
HP N/A
RPM N/A
CAPACITY 0
TEMP 100 C
PRES. ATM

EQ. NO. V-5317
TYPE VESL
NAME SOL. REC. OH REC
VENDOR O
MATL 304 SS
SIZE 4'-0" x 3'-0"
HP N/A
RPM N/A
CAPACITY 280 GAL
TEMP 65 C
PRES. ATM

EQ. NO. A-5105
TYPE GDTW
NAME RETREAT CURVE DMP
VENDOR PFAUDLER
MATL GLASS
SIZE 25
HP
RPM
CAPACITY
TEMP
PRES.



INTERLOCK LOGIC

STEAM VALVE (V-5301) WILL OPEN
IF TAP-5302 READER HIGH TEMP (200F)

NOTES

- EXISTING LINE
- STEAM TRACE @ INSULATE ALL ORG & DESIG. PIPING

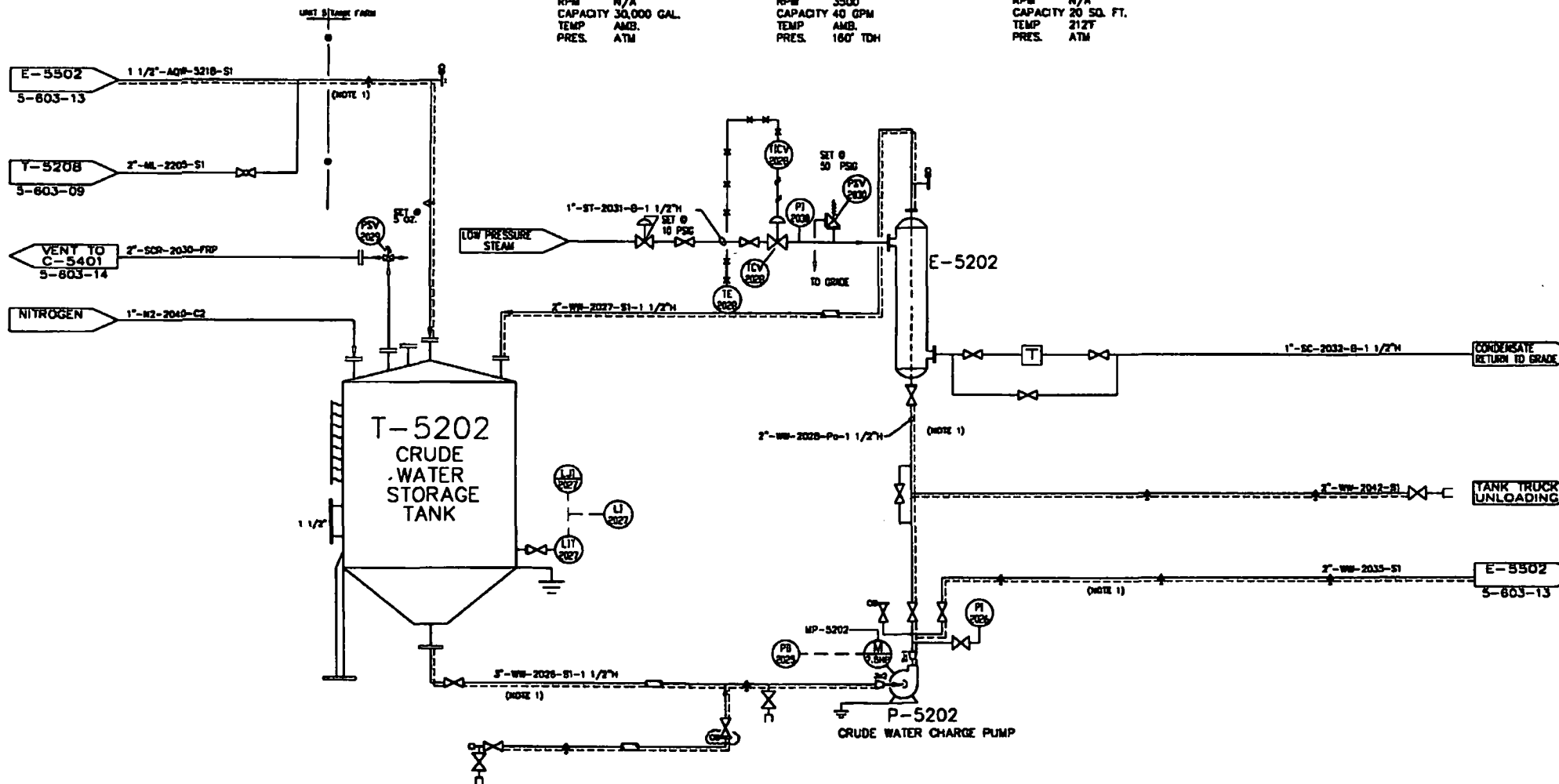
REV	REVISIONS	DATE	BY	CHKD	APPV	DATE	BY	CHKD	APPV
1	GENERAL REVISION	10/04/00	ALM	JL					
2	AS BUILT	11/20/00	ALM	MDT					
3	GENERAL REVISIONS	10/18/00	ALM	MDT					
4	GENERAL REVISIONS	8/10/00	TCC						
5	FOR ENGINEERING	6/9/00	TCC	MDT					

CEDAR CHEMIC CORPORATION WEST HELDIA, ARIZONA	
UNIT FIVE	
AVENTIS CYCLANILIDE PIPING & INSTRUMENTATION D STRIPPING & SOLVENT RECO	
SCALE NONE	DATE 5-803-11

EQ. NO. T-5202
TYPE TANK
NAME CRUDE WATER STG. TANK
VENDOR O
MATL 316SS
SIZE 12' X 36'H
HP N/A
RPM N/A
CAPACITY 30,000 GAL.
TEMP AMB.
PRES. ATM

EQ. NO. P-5202
TYPE PUMP
NAME CRUDE WATER CHG. PUMP
VENDOR DURCO
MATL 316 SS
SIZE 1.5 X 1-8/83
HP 7.5
RPM 3500
CAPACITY 40 GPM
TEMP AMB.
PRES. 160" TDH

EQ. NO. E-5202
TYPE DOUBLE PIPE
NAME CRUDE WATER STG. TANK HEATER
VENDOR O
MATL 316SS/C.S.
SIZE N/A
HP N/A
RPM N/A
CAPACITY 20 SQ. FT.
TEMP 212°F
PRES. ATM



NOTE:

(1) STEAM TRACING USED FOR FREEZE PROTECTION ONLY

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DATE: 11/20/02 BY: JHJ CHKD: JHJ APPR: JHJ

DATE: 8/10/02 BY: JHJ CHKD: JHJ APPR: JHJ

DATE: 8/10/02 BY: JHJ CHKD: JHJ APPR: JHJ

CEDAR CHEMICAL CORPORATION
WEST MELINA, ARIZONA

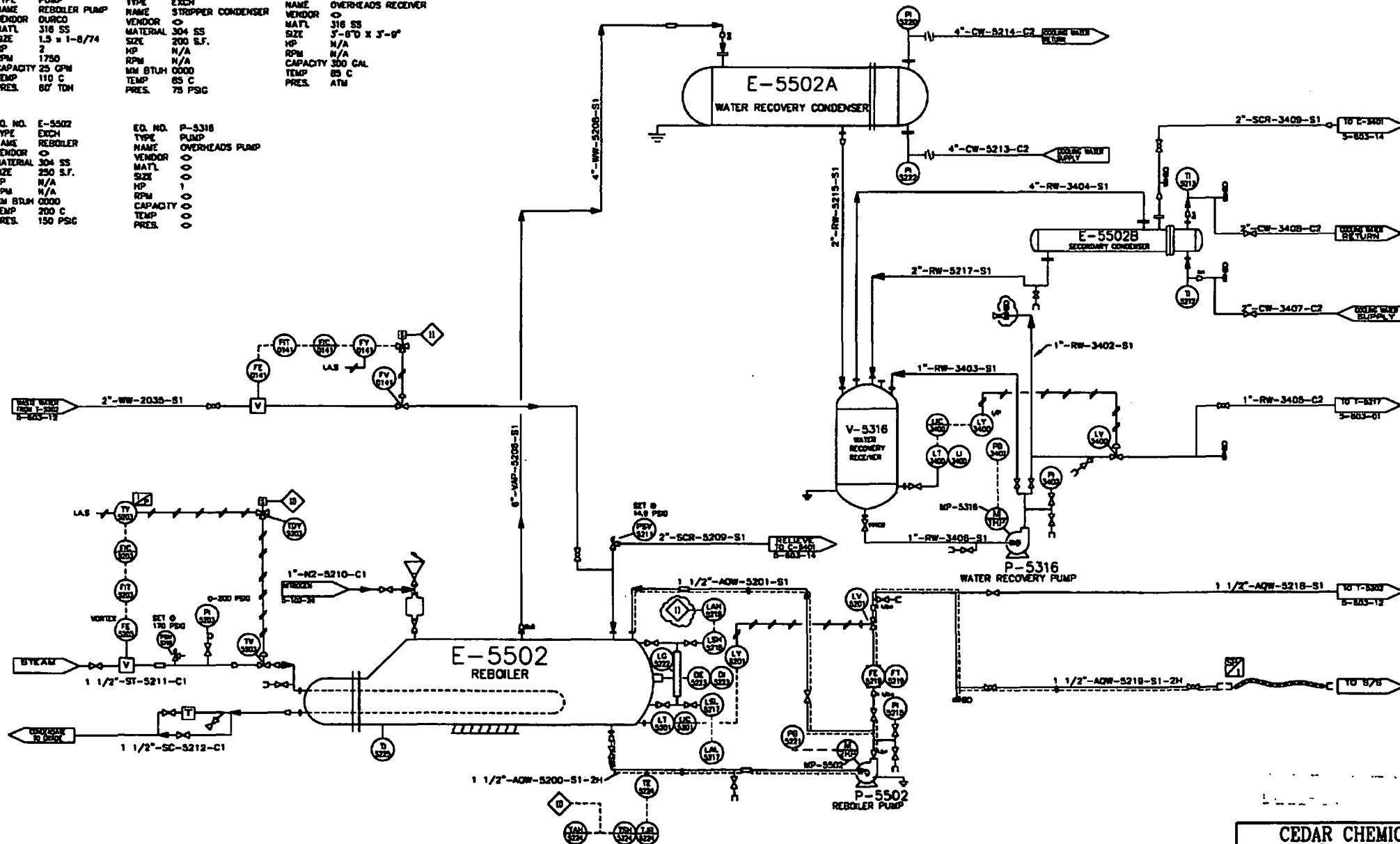
UNIT FIVE

AVANTIS CYCLANILIDE
PIPING & INSTRUMENTATION C
RAW MATERIAL STORAGE & HJ

DATE: NONE BY: 5-603-12

EQ. NO. P-5502	EQ. NO. E-5502A	EQ. NO. V-5316
TYPE PUMP	TYPE EXCH	TYPE OVERHEADS RECEIVER
NAME REBOILER PUMP	NAME STRIPPER CONDENSER	NAME
VENDOR DURCO	VENDOR O	VENDOR O
MATL 316 SS	MATERIAL 304 SS	MATL 316 SS
SIZE 1.5 x 1-8/74	SIZE 200 S.F.	SIZE 5'-8"0 x 5'-8"
HP 2	HP N/A	HP N/A
RPM 1750	RPM N/A	RPM N/A
CAPACITY 25 GPM	MM BTUH 0000	CAPACITY 300 CAL
TEMP 110 C	TEMP 85 C	TEMP 85 C
PRES. 60' TDH	PRES. 75 PSIG	PRES. ATM

EQ. NO. E-5502	EQ. NO. P-5316
TYPE EXCH	TYPE PUMP
NAME REBOILER	NAME OVERHEADS PUMP
VENDOR O	VENDOR O
MATERIAL 304 SS	MATL O
SIZE 250 S.F.	SIZE O
HP N/A	HP 1
RPM N/A	RPM O
MM BTUH 0000	CAPACITY O
TEMP 200 C	TEMP O
PRES. 150 PSIG	PRES. O



CEDAR CHEMIC CORPORATION
WEST HOLM, ALABAMA
UNIT FIVE

AVENTIS CYCLANLIDE
PIPING & INSTRUMENTATION
WATER RECOVERY

NONE 5-603-13

INTERLOC LOGIC:

0. TV-5208 CLOSES ON HIGH TEMP (212°F)
1. FV-5226 CLOSES ON HIGH LEVEL

SP-1: 1 1/2" LOADING HOSE, CONVOLUTED,
316 SS WITH INTEGRAL JACKET

NO.	REVISIONS	DATE	BY	CHKD	APPROV	DATE	BY	CHKD	APPROV
1	AS BUILT	11/20/00	ALM	MSF					
2	GENERAL REVISIONS	10/16/00	ALM	MSF					
3	GENERAL REVISIONS	8/10/00	TDG						
4	FOR ENGINEERING	6/6/00	TDG	MSF	MSF				

EQ. NO. V-5401
TYPE VESSEL
NAME VACUUM PUMP I.O. POT
VENDOR
MATL SS
SIZE N/A
HP N/A
RPM N/A
CAPACITY 500 GAL
TEMP AMS
PRES. FULL VACUUM

EQ. NO. V-5402
TYPE VESSEL
NAME VACUUM EXHAUST I.O. POT
VENDOR
MATL SS
SIZE N/A
HP N/A
RPM N/A
CAPACITY 300 GAL
TEMP AMS
PRES. ATM

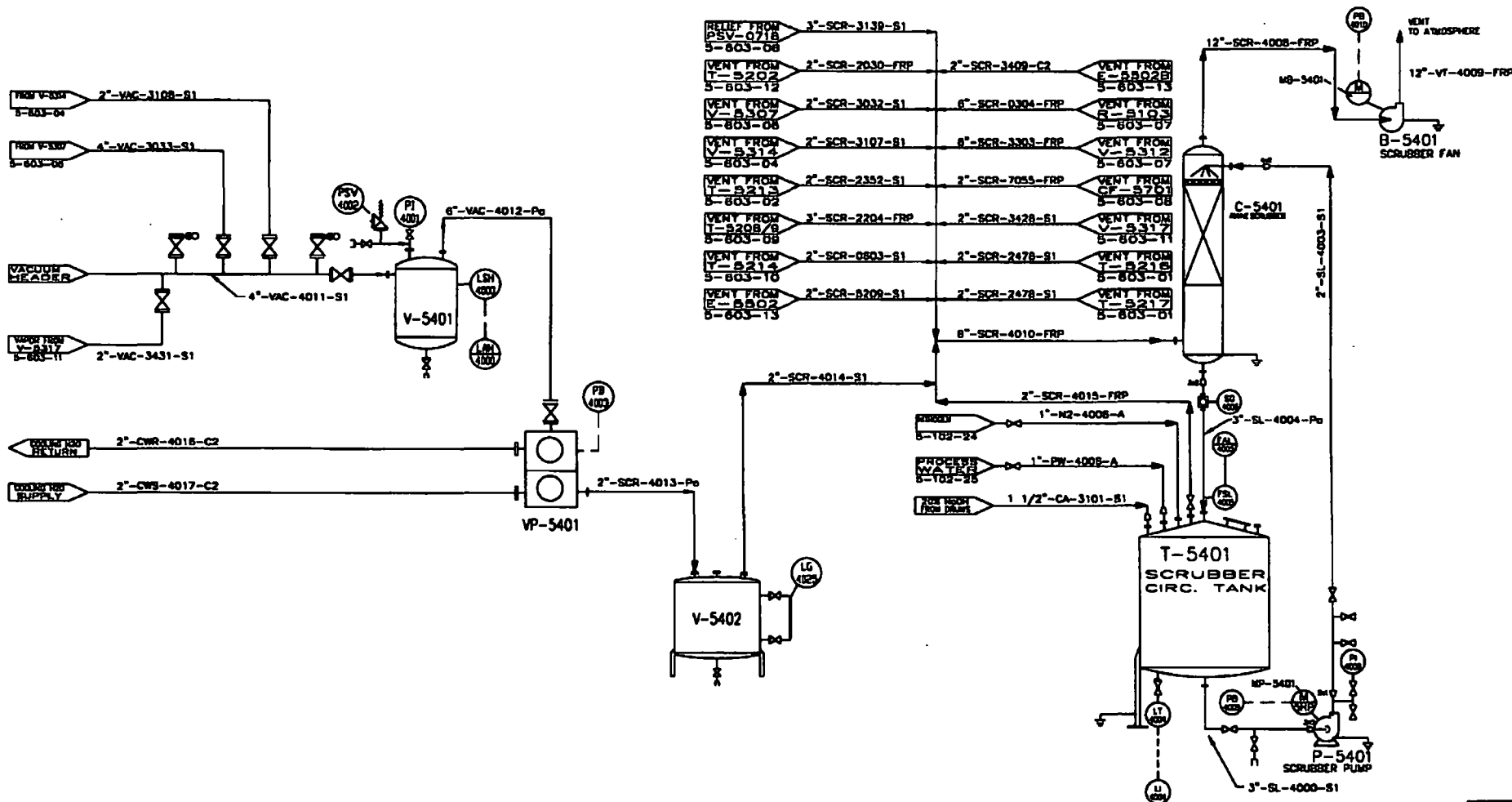
EQ. NO. T-5401
TYPE TANK
NAME AMINE SCRUBBER CIRC. TANK
VENDOR
MATL PPL
SIZE 8'0" X 7'-5"
HP N/A
RPM N/A
CAPACITY 1800 GAL
TEMP AMS
PRES. ATM

EQ. NO. P-5401
TYPE PUMP
NAME AMINE SCRUBBER CIRC. PUMP
VENDOR
MATL 316 SS
SIZE 2X1-10/100
HP 5
RPM 1750
CAPACITY 75 GPM
TEMP AMS
PRES. 100" TDH

EQ. NO. B-5401
TYPE FAN
NAME AMINE SCRUBBER
VENDOR
MATL FRP
SIZE N/A
HP N/A
RPM N/A
CAPACITY 2500 CFM
TEMP AMS
PRES. 12" WC

EQ. NO. C-5401
TYPE COLUMN
NAME AMINE SCRUBBER
VENDOR
MATL 316 SS
SIZE 3'-6"0" X 18'-0"
HP N/A
RPM N/A
CAPACITY 2500 CFM
TEMP AMS
PRES. ATM

EQ. NO. C-5402
TYPE COLUMN
NAME AMINE SCRUBBER COLUMN
VENDOR
MATL
SIZE
HP
RPM
CAPACITY
TEMP
PRES.



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CEDAR CHEMIC CORPORATION WEST HELONA, ARIZONA	
UNIT FIVE	
AVENTIS CYCLANILIDE PIPING & INSTRUMENTATION VACUUM AND SCRUBBER ST	
SCALE	NONE
NO.	5-603-14

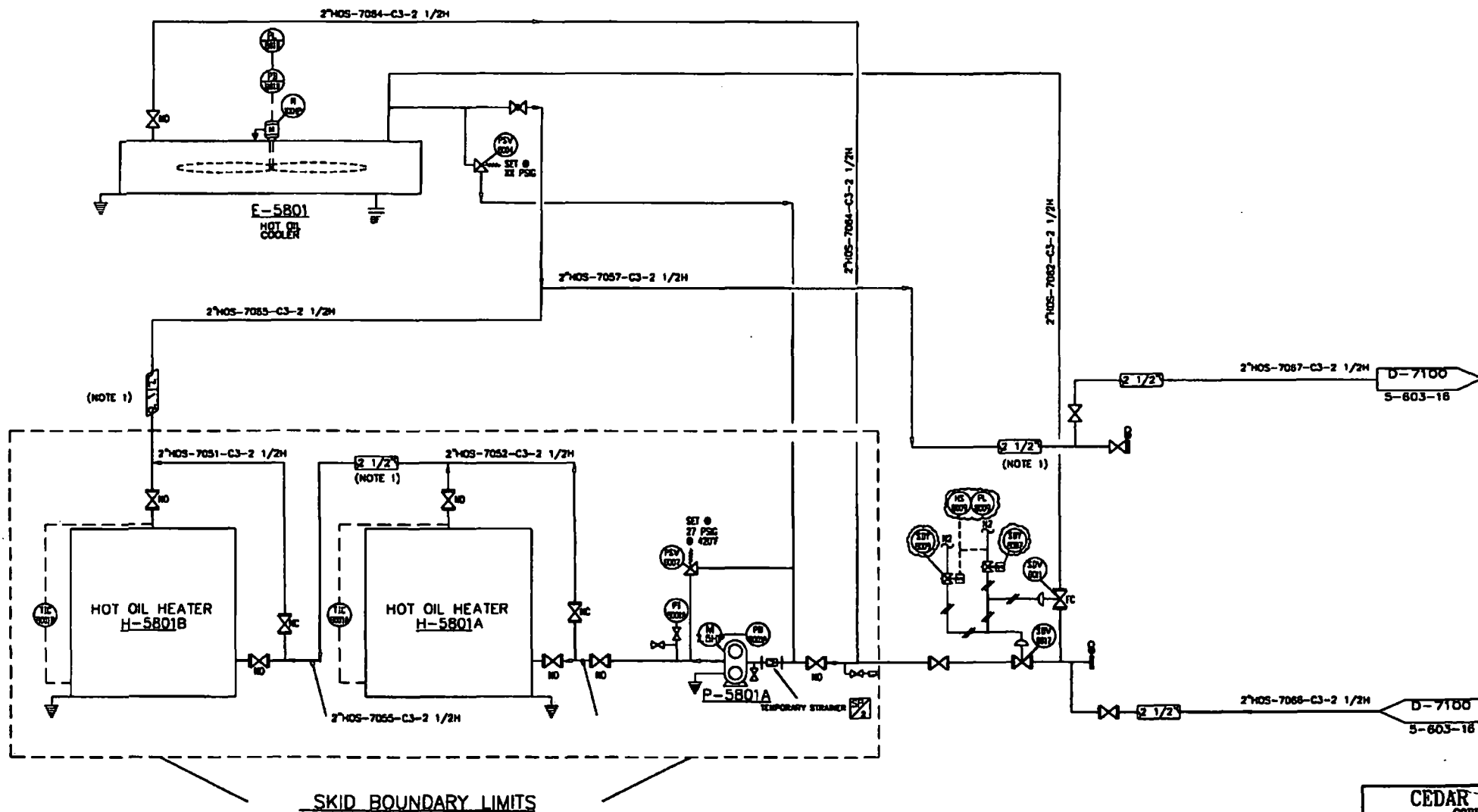
EQ. NO. V-5801
TYPE TANK
NAME HOT OIL SURGE TANK
VENDOR
MAT'L 304SS
SIZE
HP
RPM
CAPACITY 250 GAL.
TEMP 425F
PRES. 40PSIG

EQ. NO. P-5801A
TYPE PUMP
NAME HOT OIL PUMP
VENDOR DUCTILE
MAT'L
SIZE
HP 7.5
RPM 3500
CAPACITY 80GPM
TEMP 420F
PRES.

EQ. NO. H-5801A
TYPE EXCHANGER
NAME HOT OIL HEATER
VENDOR CHROMALOX
MAT'L SS
SIZE N/A
HP N/A
RPM N/A
CAPACITY 270,000 BTU/HR
TEMP NA
PRES. 20 PSIG

EQ. NO. H-5801B
TYPE EXCHANGER
NAME HOT OIL HEATER
VENDOR CHROMALOX
MAT'L SS
SIZE N/A
HP N/A
RPM N/A
CAPACITY 270,000 BTU/HR
TEMP NA
PRES. 20 PSIG

EQ. NO. E-5801
TYPE EXCHANGER
NAME HOT OIL COOLER
VENDOR HUDSON
MAT'L 275 FT BARE
SIZE
HP 7
RPM
CAPACITY 1.7MM BTU/HR
TEMP 425 F
PRES. 25 PSIG

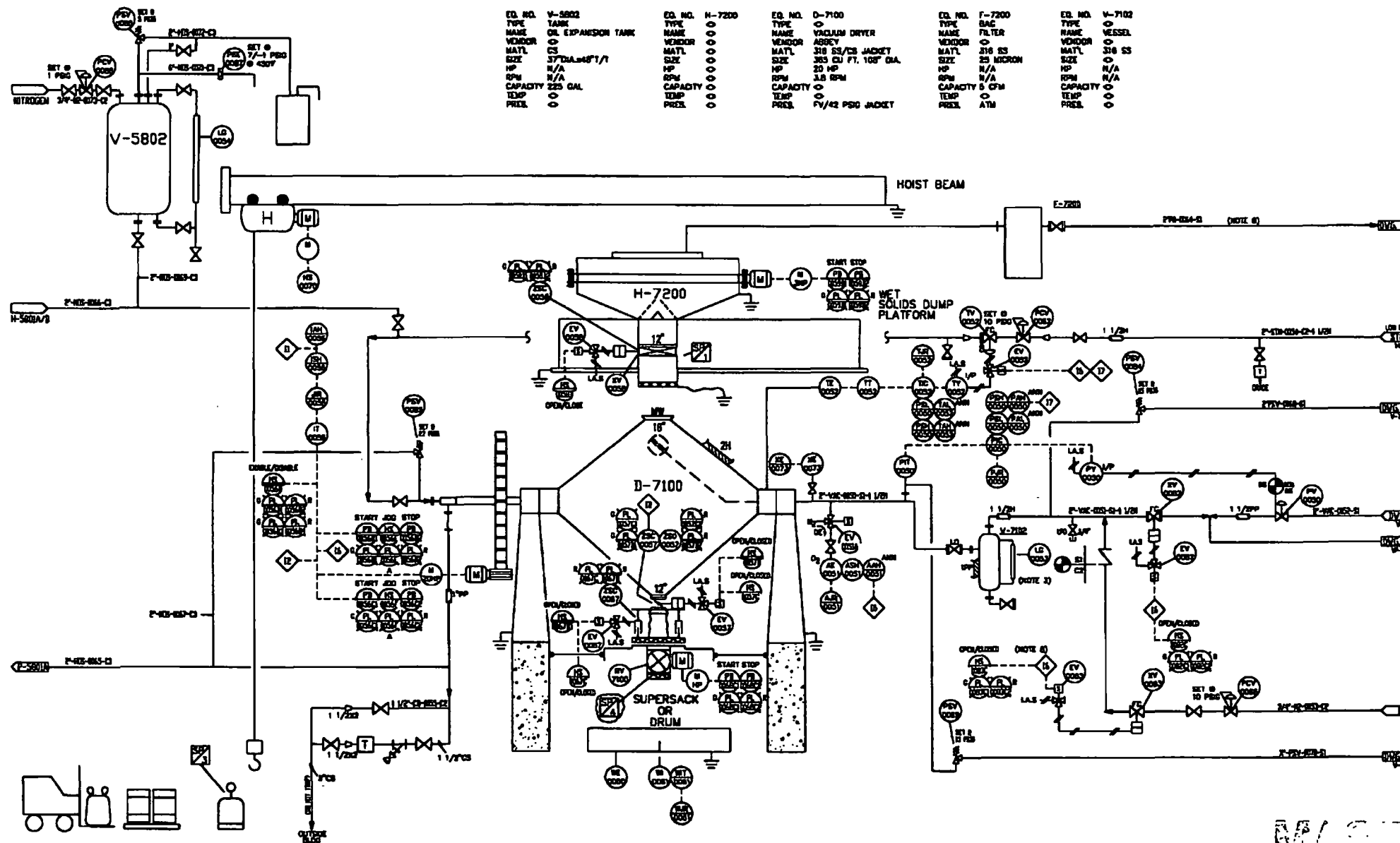


NOTES:

- 1) ALL HOT OIL INSULATION TO BE FIBERGLASS 1200.
- 2) WENT TO SAFE LOCATION- INCLUDE "SAFE SORCEK"
- 3) 300g AHEAD SYSTEM

NO.	REVISIONS	DATE	BY	CHKD	APPR
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CEDAR CHEMIC CORPORATION	
WEST HELONA, ALABAMA	
UNIT FIVE	
AVENTIS CYCLANILDE PIPING & INSTRUMENTATION D HOT OIL SUPPLY/RETURN	
SCALE	5-603-15



EQ. NO.	V-5802	EQ. NO.	H-7200	EQ. NO.	D-7100	EQ. NO.	F-7200	EQ. NO.	V-7102
TYPE	TANK	TYPE	DRYER	TYPE	VACUUM DRYER	TYPE	FILTER	TYPE	SAC
NAME	OIL EXPANSION TANK	NAME	DRYER	NAME	318 SS/CS JACKET	NAME	25 MICRON	NAME	318 SS
VENDOR	CS	VENDOR	CS	VENDOR	CS	VENDOR	CS	VENDOR	CS
MATL	CS	MATL	CS	MATL	CS	MATL	CS	MATL	CS
SIZE	37" DIA. x 48' T	SIZE	303 CU FT. 108" DIA.	SIZE	303 CU FT. 108" DIA.	SIZE	25 MICRON	SIZE	N/A
HP	N/A	HP	20 HP	HP	20 HP	HP	N/A	HP	N/A
RPM	N/A	RPM	3.8 RPM	RPM	3.8 RPM	RPM	N/A	RPM	N/A
CAPACITY	225 GAL	CAPACITY	0	CAPACITY	0	CAPACITY	5 CFM	CAPACITY	0
TEMP	0	TEMP	0	TEMP	0	TEMP	0	TEMP	0
PRESS	0	PRESS	0	PRESS	0	PRESS	ATM	PRESS	0

NOTES

- ALL BOOTS TO BE CARBON FILLED PIPE FOR ELEC. CONDUCTANCE
- ALL CONNECTIONS TO BE ELECTRICALLY BONDED
- LD TO BE PAD-FLANGE STYLE W/CLAMP GLASS
- LOCATED ON MEZZANINE AND GROUND LEVEL
- ROUTE TO SAFE LOCATION
- ROUTE ABOVE ROOF W/RAIN HAT
- IS PERMISSIVE TUNER @ 30 KHZ
- FLANGE @ 8" JTS

INTERLOCK LOGIC

- HIGH AMP S/D DRIVER MOTOR
- 200-000V MUST BE SWITCHED TO OPERATE V-5802
- LOW LEVEL STOPS H-7200
- HIGH LEVEL STARTS H-7200
- H-7200 LEVEL STOPS D-7100
- H-7200 LEVEL STOPS V-7102
- H-7200 LEVEL STOPS VACUUM PUMP, STOPS DRYER, STOPS HEAT INPUT
- HIGH PRESS S/D STEAM

SPECIALTY ITEMS

- TRANSITION
- PNEUMATIC L/D SEALER
- DRUM LIFTOR/DUMPER
- SWOCD 50720

NO.	REVISIONS	DATE	BY	CHKD	APPR
1	GENERAL REVISION	10/04/03	ALM	JE	
2	AS BUILT	11/20/00	ALM	RP	
3	GENERAL REVISIONS	8/6/00	TCC		
4	GENERAL REVISIONS	8/6/00	TCC		
5	FOR ENGINEERING	6/6/00	TCC	RP	RP

CEDAR CHEMICAL CORPORATION	
UNIT 5	
AVANTIS CYCLANILIDE PIPING & INSTRUMENTATION DIA	
DATE	5-603-18

EQ. NO. VP-7100
TITLE: VACUUM PUMP
TYPE: DRY CLAP
MATERIAL: DUCTILE IRON
MODEL: CP-300
HP: 30
CAPACITY: 230 CFM
DESIGN: 15 TMR

EQ. NO. E-5403
TITLE: DRYER SCRUBBER TANK COOLER
TYPE: SHELL & TUBE
MATERIAL: S/S
SIZE: 18" x 12' 6"

EQ. NO. E-5218
TITLE: SCRUBBER
TYPE: CO COOLER
MATERIAL: 304 SS TUBE/CS SHELL
SIZE: 18" x 12' 6"

EQ. NO. V-7101
TITLE: VESSEL
TYPE: VESSEL
MATERIAL: 304 SS
SIZE: 12" x 12' 6"

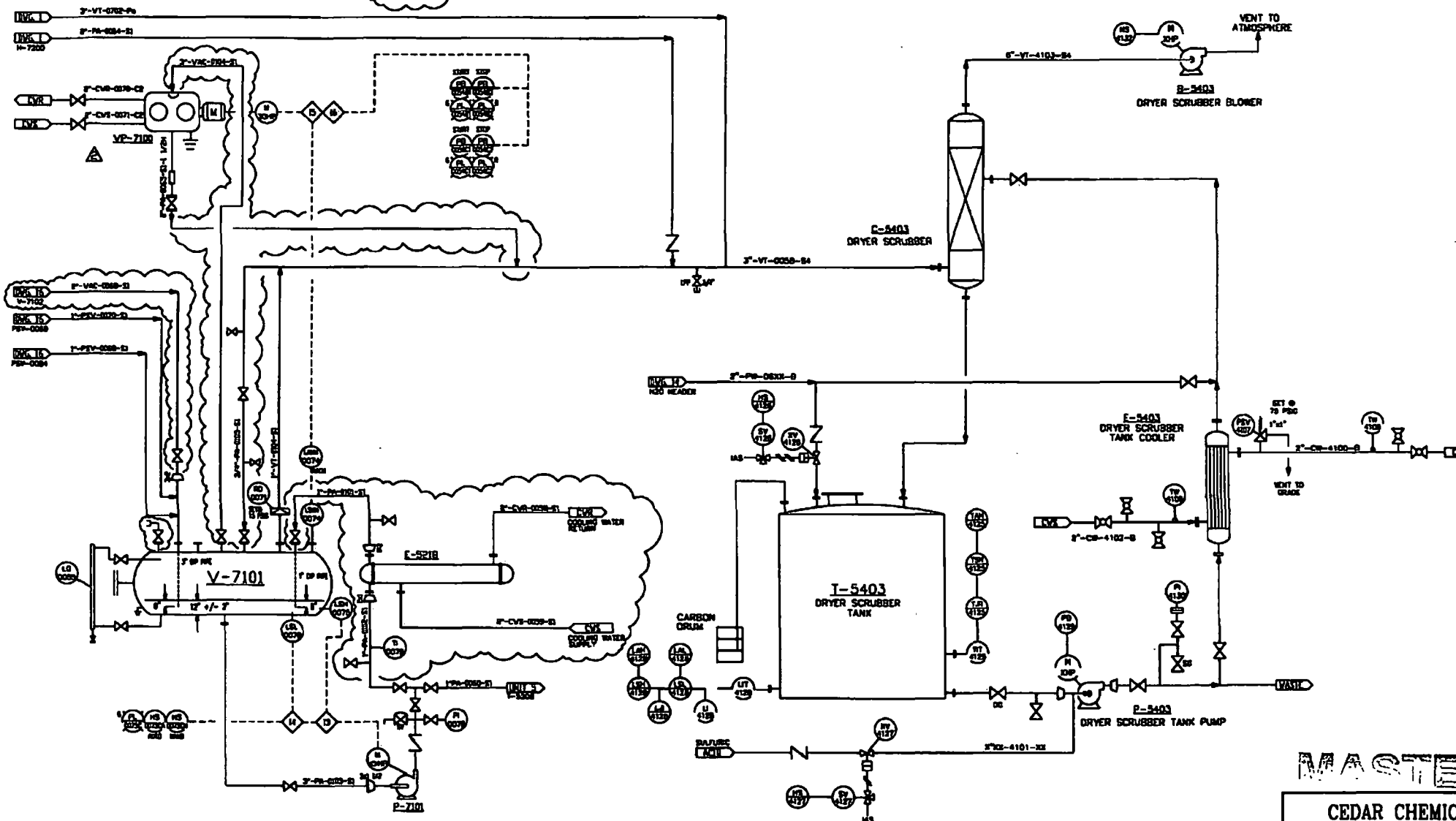
EQ. NO. P-7101
TITLE: CONDENSATE TRANSFER PUMP
TYPE: VESSEL
MATERIAL: 304 SS
SIZE: 1 1/2" x 3"

EQ. NO. T-5403
TITLE: DRYER SCRUBBER TANK
TYPE: VERTICAL
MATERIAL: S/S
SIZE: 18" x 12' 6"

EQ. NO. C-5403
TITLE: DRYER SCRUBBER
TYPE: VERTICAL
MATERIAL: S/S
SIZE: 18" x 12' 6"

EQ. NO. P-5403
TITLE: DRYER SCRUBBER TANK PUMP
TYPE: VESSEL
MATERIAL: S/S
SIZE: 18" x 12' 6"

EQ. NO. B-5403
TITLE: DRYER SCRUBBER BLOWER
TYPE: PRESSURE BLOWER
MATERIAL: S/S
SIZE: 18" x 12' 6"



NO.	REVISION	DATE	BY	CHK	APPV
1	ADDITION OF E-5218 AND V-7101 MODIFICATIONS	11/12/00	ALM	DM	DM
2	CONDENSER VAPOR LINE ADDITION	12/12/00	ALM	DM	DM
3	AS BUILT	11/20/00	ALM	DM	DM
4	VP-7100 CHANGE	9/13/00	DM	DM	DM
5	GENERAL REVISIONS	8/5/00	DM	DM	DM
6	FOR DIMENSIONS	6/6/00	DM	DM	DM

NO.	REVISION	DATE	BY	CHK	APPV
1	ADDITION OF E-5218 AND V-7101 MODIFICATIONS	11/12/00	ALM	DM	DM
2	CONDENSER VAPOR LINE ADDITION	12/12/00	ALM	DM	DM
3	AS BUILT	11/20/00	ALM	DM	DM
4	VP-7100 CHANGE	9/13/00	DM	DM	DM
5	GENERAL REVISIONS	8/5/00	DM	DM	DM
6	FOR DIMENSIONS	6/6/00	DM	DM	DM

WASTE

CEDAR CHEMICAL CORPORATION
WEST HELDEN, ARIZONA

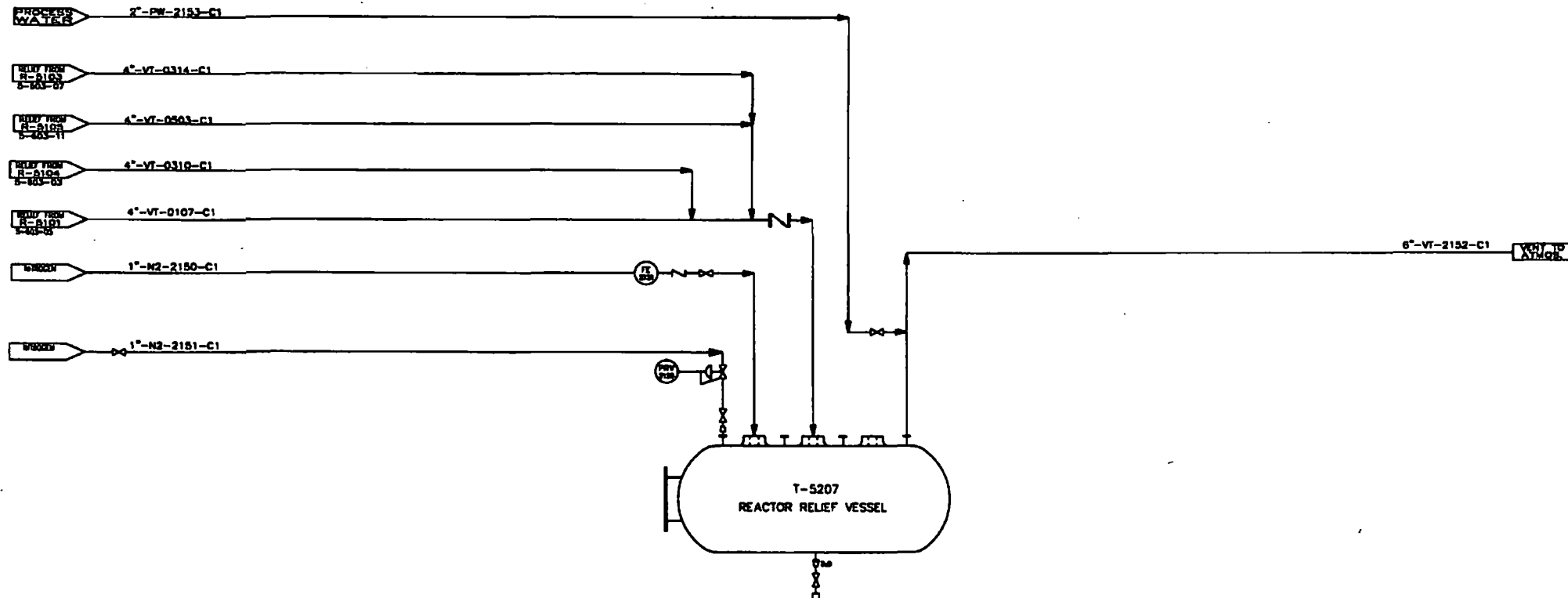
UNIT

AVANTIS CYCLANILIDE PIPING & INSTRUMENTATION D

SCALE: NONE

5-603-17

EQ. NO. T-5207
 TYPE VESSEL
 NAME REACTOR RELIEF VESSEL
 VENDOR Taylor - Forge
 MATL 316 SS
 SIZE STD = 15'
 HP N/A
 RPM N/A
 CAPACITY 2200 GAL
 TEMP 40 C
 PRES 1100 PSIG



NO	REVISIONS	DATE	BY	CHKD	APPV	DATE
1	AS BUILT	11/20/00	ALM	MSF		
2	GENERAL REVISIONS	8/8/00	TCG	MSF		
3	FOR ENGINEERING	8/8/00	TCG	MSF		

CEDAR CHEMIC. CORPORATION WEST HELENA, MONTANA	
UNIT FIVE	
AVENTIS CYCLANILIDE PIPING & INSTRUMENTATION D VENT CONDENSER & RELIEF V	
SCALE NONE	NO. 5-803-18

EQ. NO. P-5217
TITLE WATER PUMP
TYPE CENTRIFUGAL
VENDOR DURCO
MAT'L 316 SS
SIZE 3x1.5x10
HP 5 HP
RPM 1750
CAPACITY 50 GPM
TEMP 0
PRES. 0

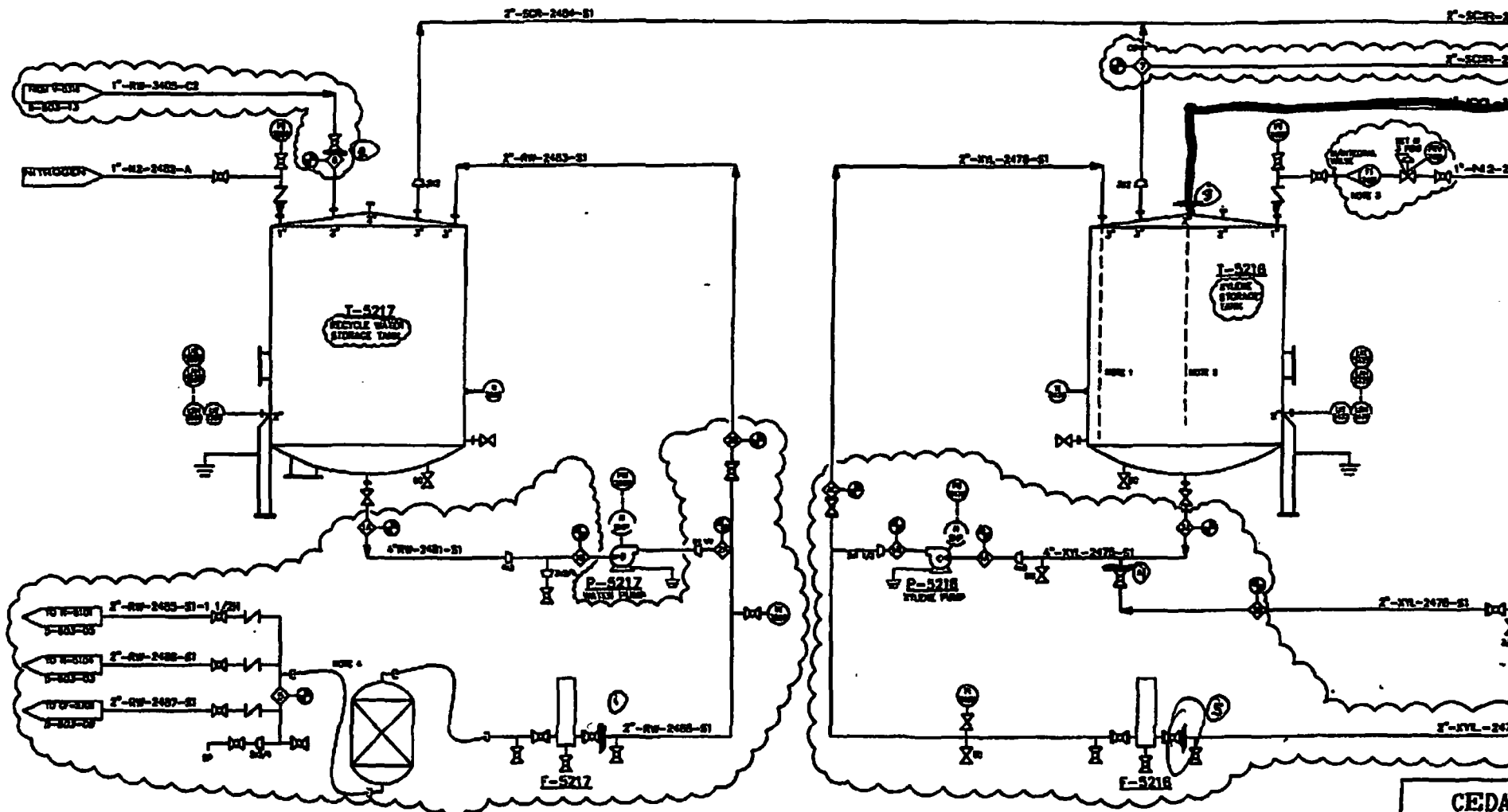
EQ. NO. F-5217
TITLE RECYCLED WATER FILTER
TYPE CARTRIDGE (5 MICRON P.P.)
VENDOR 0
MAT'L 316 SS
SIZE 2x2
HP 0
RPM 0
CAPACITY 0
TEMP 0
PRES. 0

EQ. NO. T-5217
TITLE XYLENE HOLD TANK
TYPE VERTICAL
VENDOR 0
MAT'L J16SS
SIZE 9'-0" O.D. X 38'-8" T/T
HP 0
RPM 0
CAPACITY 12,000 GAL
TEMP 0
PRES. 0

EQ. NO. P-5218
TITLE XYLENE PUMP
TYPE CENTRIFUGAL
VENDOR CHESTERTON
MAT'L 316 SS
SIZE 3x1.5x10
HP 5 HP
RPM 1750
CAPACITY 50 GPM
TEMP 0
PRES. 100 FT

EQ. NO. T-5218
TITLE RECYCLE WATER STORAGE TANK
TYPE VERTICAL
VENDOR 0
MAT'L J16SS
SIZE 9'-0" O.D. X 38'-8" T/T
HP 0
RPM 0
CAPACITY 12,000 GAL
TEMP 0
PRES. 0

EQ. NO. F-5218
TITLE XYLENE CARTRIDGE FILTER
TYPE CARTRIDGE (5 MICRON P.P.)
VENDOR PARKER
MAT'L J16SS
SIZE 2' X 2'
HP 0
RPM 0
CAPACITY 0
TEMP AMBIENT
PRES. 0



- NOTES:
1. 2" DIP PIPE WITH 1/4" ANTI-SIPHON HOLE (REMOVABLE).
2. 1" DIP PIPE WITH 1/4" ANTI-SIPHON HOLE (REMOVABLE).
3. ACCESSIBLE FROM GRADE
4. LEASED CARBON ABSORBER

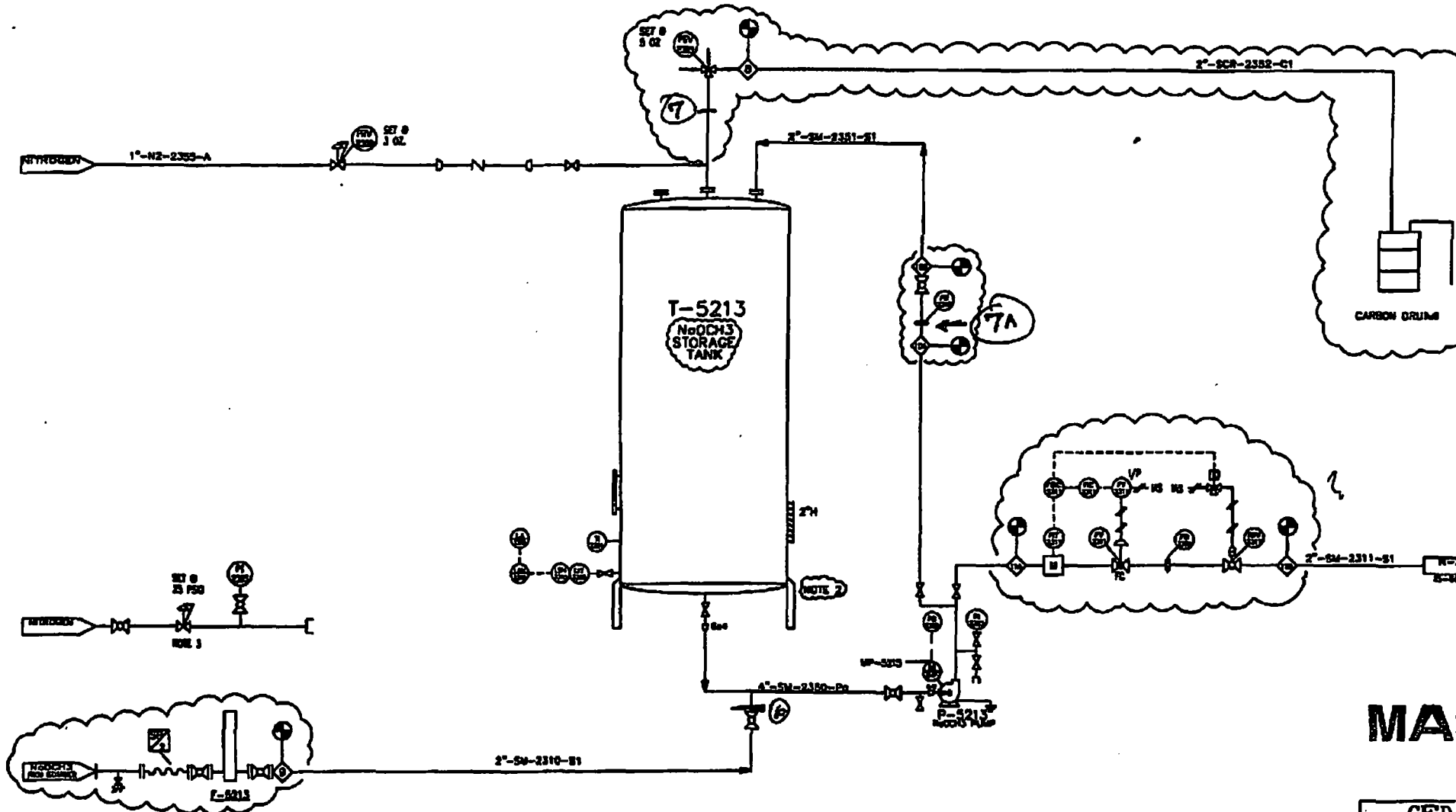
REVISIONS				DATE			
NO.	DESCRIPTION	BY	CHKD	DATE	BY	CHKD	DATE
1	AS SHOWN	00000	000	000	0000	000	0000
2	00000	00000	000	000	0000	000	0000
3	00000	00000	000	000	0000	000	0000
4	00000	00000	000	000	0000	000	0000
5	00000	00000	000	000	0000	000	0000

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PIPING & INSTRUMENTATION
WATER &
5-60

EQ. NO. T-5213
 TYPE TANK
 NAME NaOCH3 STORAGE TANK
 VENDOR O
 MATL 316SS
 SIZE -
 HP N/A
 RPM N/A
 CAPACITY 10,000 GAL
 TEMP 10 C
 PRES. ATM

EQ. NO. P-5213
 TYPE PUMP
 NAME NaOCH3 PUMP
 VENDOR DURCO
 MATL 316 SS
 SIZE 2 x 2R-10/80
 HP 10
 RPM 1750
 CAPACITY 60 CPM
 TEMP 10 C
 PRES. 68" TDH

EQ. NO. F-5213
 TYPE FILTER
 NAME CARTRIDGE FILTER
 VENDOR O
 MATL 316SS
 SIZE 2"x2"
 HP N/A
 RPM N/A
 CAPACITY 5 MICRON FILTERS
 TEMP
 PRES.



NOTES

1. SEE DRAWING 17-1001 FOR TANK
2. STREAM TRACING TO BE DONE. A LINE TO BE DISCONNECTED, DRAINED, AND FLOODED.
3. SEE DRAWING 17-1001 FOR TANK

REV	DESCRIPTION	DATE	BY	APP	REV	DESCRIPTION	DATE	BY	APP
1	AS BUILT	11/25/00	ALM	REV	1	AS BUILT	11/25/00	ALM	REV
2	GENERAL REVISION	12/18/00	ALM	REV	2	GENERAL REVISION	12/18/00	ALM	REV
3	GENERAL REVISION	1/1/01	ALM	REV	3	GENERAL REVISION	1/1/01	ALM	REV

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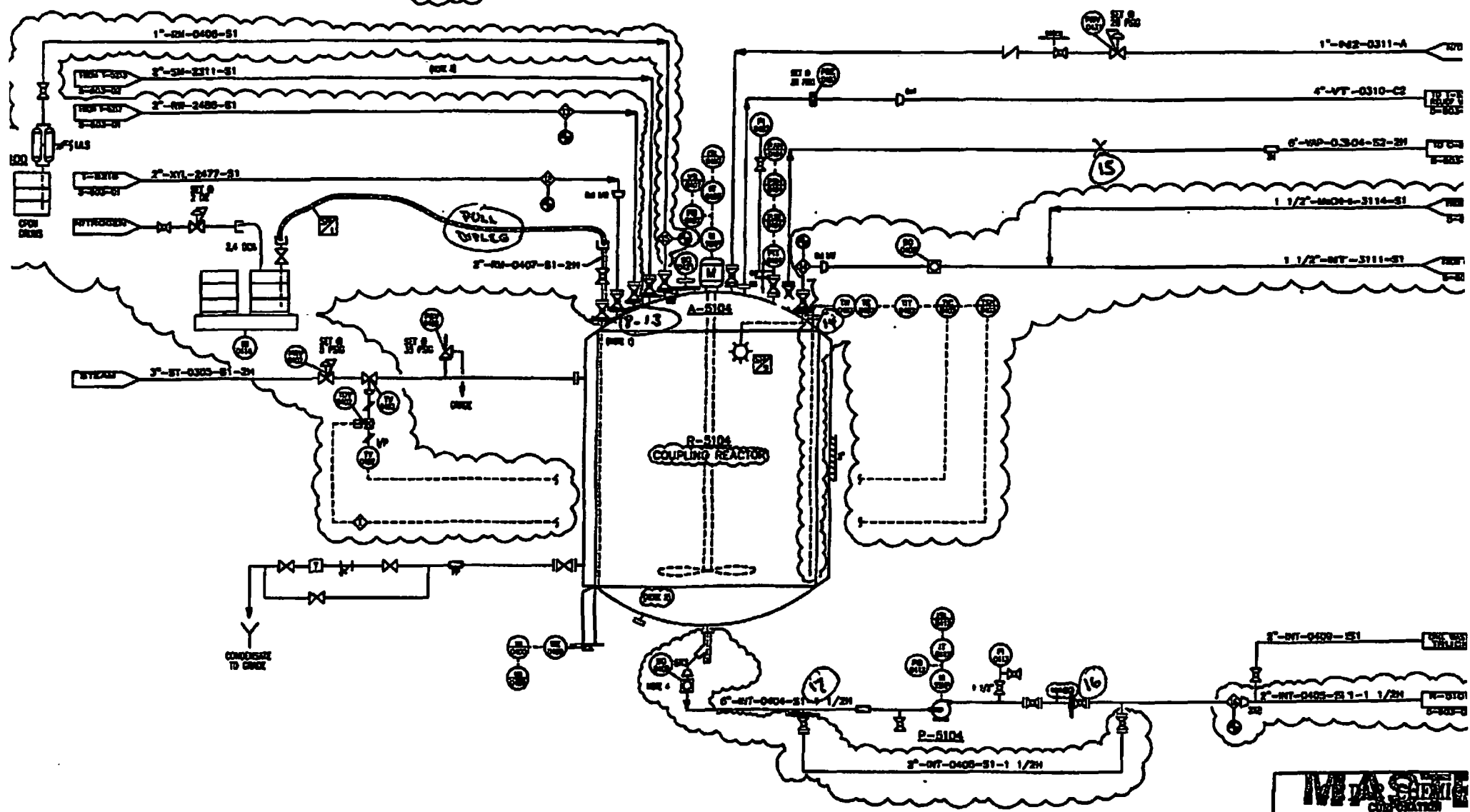
DATE NONE

EQ. NO. P-5104
TYPE CDM PUMP
NAME
VENDOR
MATERIAL
SIZE
HP
RPM
CAPACITY
TEMP
PRESS

EQ. NO. R-5104
TYPE REACTOR
NAME VERTICAL
VENDOR INTERMOUNT SOLID WORKS
MATERIAL
SIZE 10' DIA. X 70' HGT
HP
RPM
CAPACITY 2,870 GAL
TEMP 300° DESIGN
PRESS 30 PSIG MTL/75 PSIG EXTL

EQ. NO. P-5104
TYPE REACTOR PUMP
NAME CENTRIFUGAL
VENDOR DUNLOP MARK P-SERIAL J347823
MATERIAL
SIZE 30"
HP 25
RPM 1,500
CAPACITY 300 GPM
TEMP
PRESS 100 PSIG

EQ. NO. A-5104
TYPE REACTOR ACTUATOR
NAME
VENDOR
MATERIAL
SIZE
HP
RPM
CAPACITY
TEMP
PRESS



WEL SPACED BY 1/4" INTERSPIN HOLE AND 1/4" DEEP HOLE
RETURN HOLES CONCEPT BEHINDING WELDED SEALED FLASH WELDED WALL
(WELDED BEHINDING) (FLASHER)
U. IN VERTICAL-BALLAST TYPE

INITIALS LKED
1. FV-ONE CLOSED (ON HIGH TEMP SHUT)
2. 4" P. SIGN JACKET HOLE
3. 3" SWAY KNEE

NO.	DESCRIPTION	DATE	BY	FOR	REVISION
1	AS BUILT	10/20/82	WJ	WJ	
2	REVISION	10/20/82	WJ	WJ	
3	REVISION	10/20/82	WJ	WJ	
4	FOR CONSTRUCTION	10/20/82	WJ	WJ	

MTA SCHEMATIC CORPORATION
KEY HOLD, DRAWING
UNIT 5
AVENTIS CYCLANILIDE
PIPING & INSTRUMENTATION ON
COUPLING REACTOR
P. 407-03

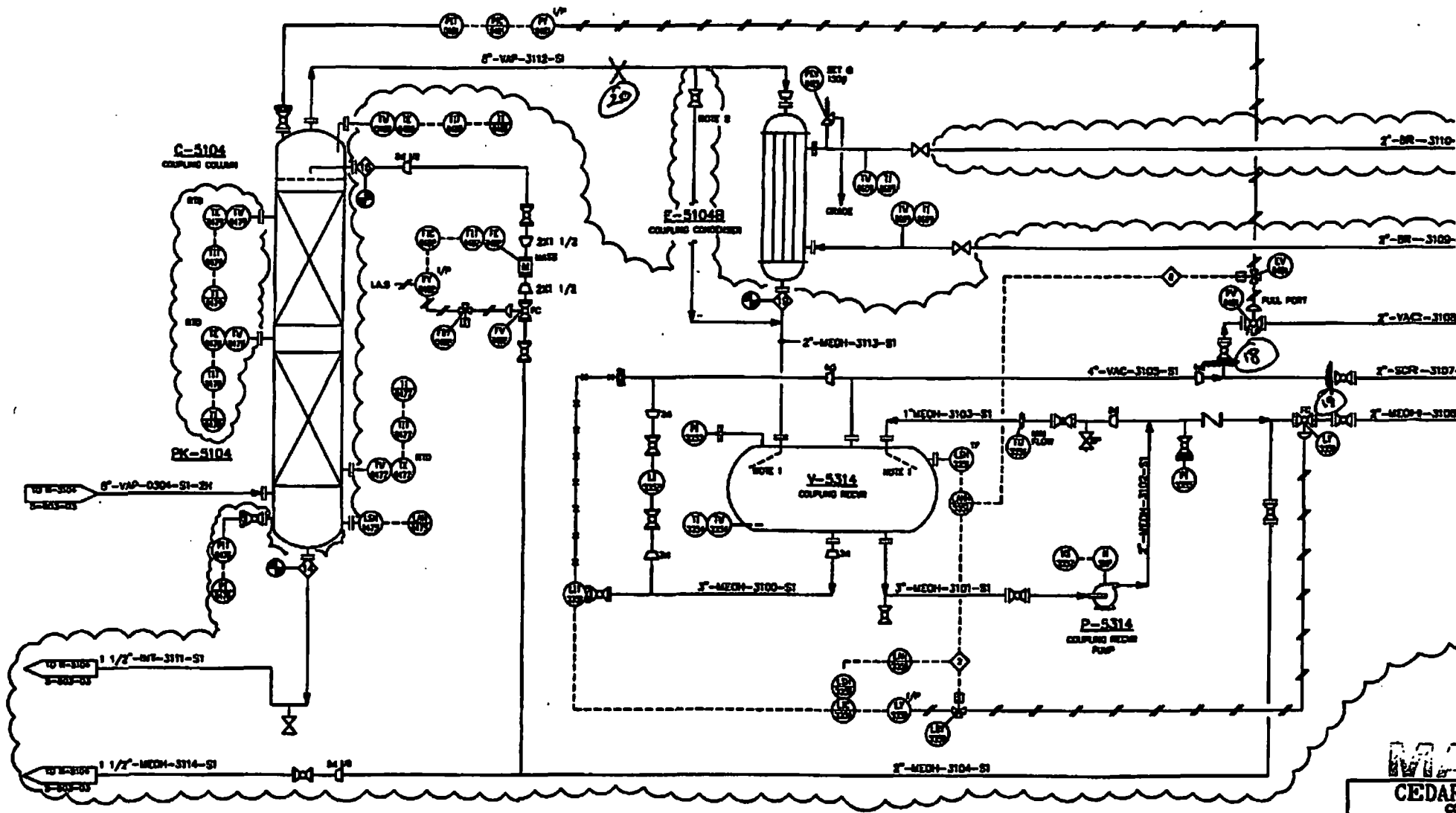
EQ. NO. C-5104
TYPE VERTICAL
NAME COUPLING COLUMN
MATERIAL 316 SS
SIZE 23.5" DIA. x 42'-5 7/8" T
HP
RPM
CAPACITY
TEMP
PRESS.

EQ. NO. PK-5104
TYPE 17 STRUCTURED
NAME COUPLING COLUMN PACKING
MATERIAL 304L SS
SIZE
HP
RPM
CAPACITY
TEMP
PRESS.

EQ. NO. E-5104B
TYPE SHELL/TUBE
NAME COUPLING CONDENSER
MATERIAL SS/SS
SIZE
HP
RPM
CAPACITY
TEMP
PRESS.

EQ. NO. V-5314
TYPE VERTICAL
NAME COUPLING RECEIVER
MATERIAL 316 SS
SIZE
HP
RPM
CAPACITY 500 GAL
TEMP
PRESS. 30 PSIG/FV

EQ. NO. P-5314
TYPE CENTRIFUGAL
NAME COUPLING RECVR PUMP
MATERIAL 316 SS
SIZE 3 1/2" DIA
HP
RPM
CAPACITY 40 GPM
TEMP
PRESS. 90 FT



NOTES:
1. INSTALL 45° SPLASH LID DIRECTING FLOW AGAINST VESSEL WALL.
2. LOW PORT DRAIN

INTERLOCK LOGIC:
2. PV-0505 CLOSING ON HIGH LEVEL
3. PV-0517 OPENING ON HIGH LEVEL

NO.	DESCRIPTION	DATE	BY	CHKD	APPROV
1	AS BUILT	11/25/00	ALB	WSP	
2	ORIGINAL REVISIONS	12/15/00	ALB	WSP	
3	ORIGINAL REVISIONS	8/01/01	ALB	WSP	
4	FOR ENGINEERING	6/16/02	ALB	WSP	

REV	DATE	BY	CHKD	APPROV
1	11/25/00	ALB	WSP	
2	12/15/00	ALB	WSP	
3	8/01/01	ALB	WSP	
4	6/16/02	ALB	WSP	

REV	DATE	BY	CHKD	APPROV
1	11/25/00	ALB	WSP	
2	12/15/00	ALB	WSP	
3	8/01/01	ALB	WSP	
4	6/16/02	ALB	WSP	

REV	DATE	BY	CHKD	APPROV
1	11/25/00	ALB	WSP	
2	12/15/00	ALB	WSP	
3	8/01/01	ALB	WSP	
4	6/16/02	ALB	WSP	

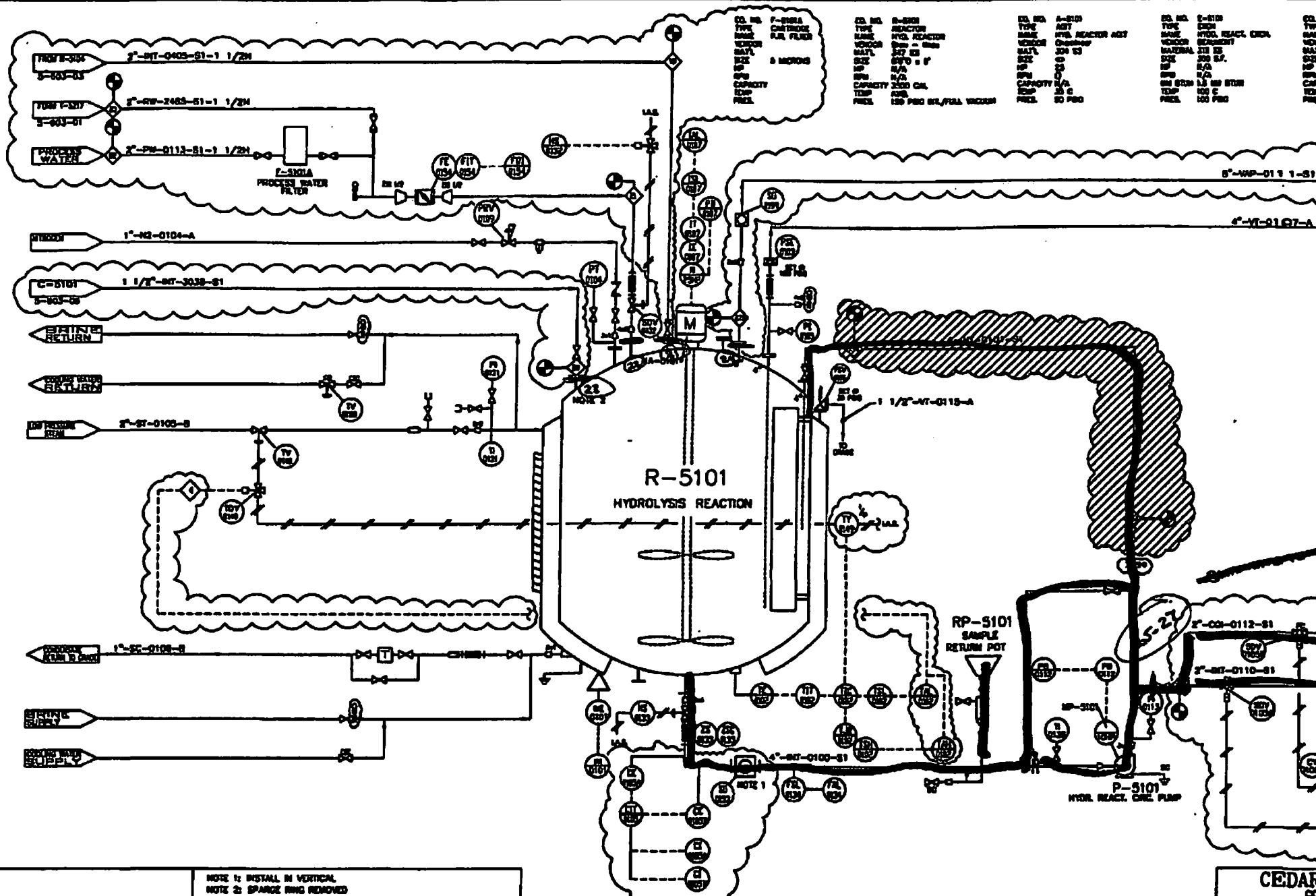
REV	DATE	BY	CHKD	APPROV
1	11/25/00	ALB	WSP	
2	12/15/00	ALB	WSP	
3	8/01/01	ALB	WSP	
4	6/16/02	ALB	WSP	

REV	DATE	BY	CHKD	APPROV
1	11/25/00	ALB	WSP	
2	12/15/00	ALB	WSP	
3	8/01/01	ALB	WSP	
4	6/16/02	ALB	WSP	

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COUPLING

REV: NONE
S-603



REVISIONS				DATE				BY			
1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10	10	10	10	10

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HYDROLYS

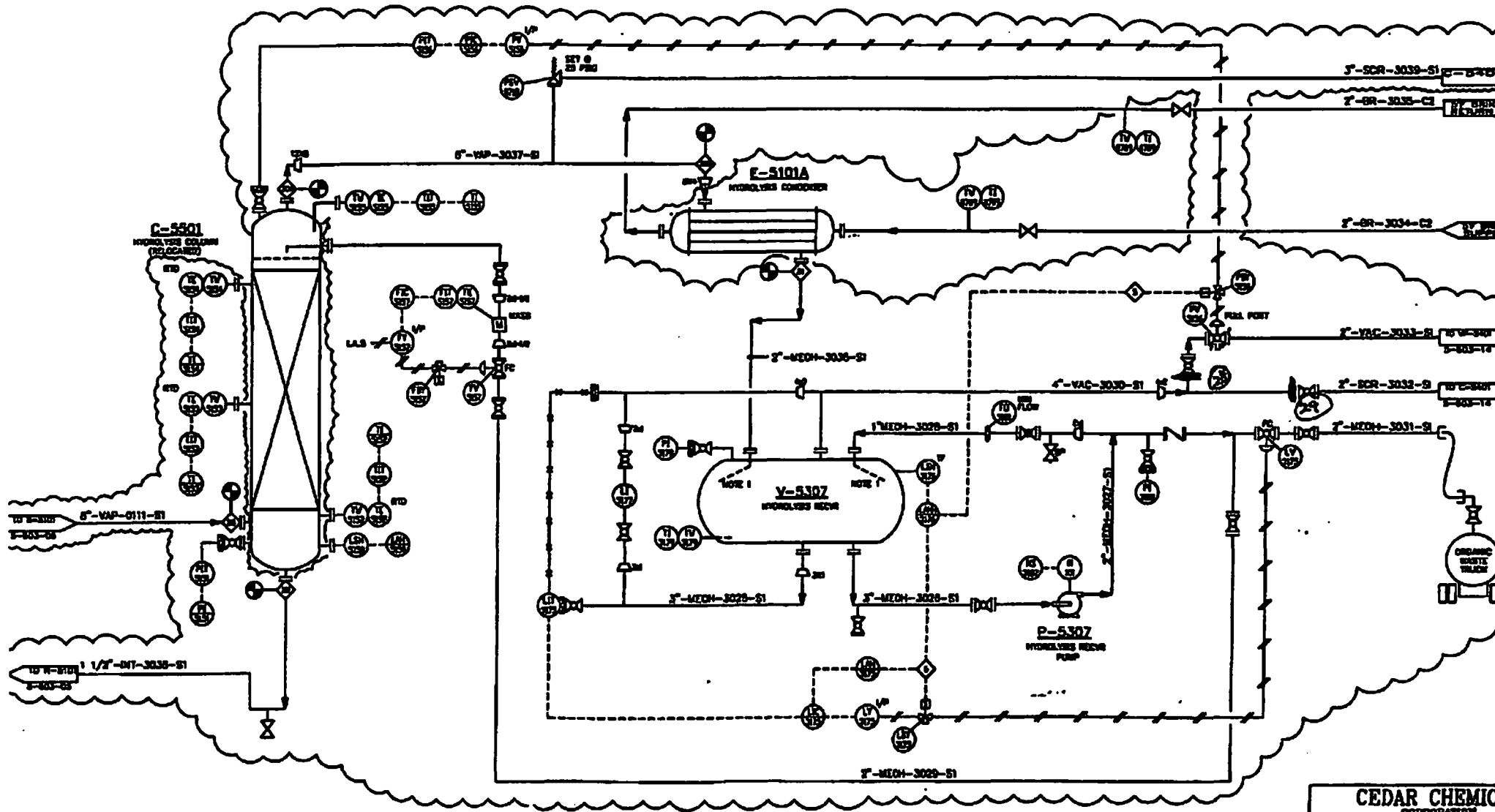
5-603

ED. NO. C-5501
TYPE VERTICAL
NAME HYDROLYSIS COLUMN
VENDOR SS
SIZE 36"
HP 1750
RPM 1750
CAPACITY 50 GPM
TEMP 120°F
PRESS. 100 FT

ED. NO. E-5101A
TYPE SHELL/TUBE
NAME HYDROLYSIS CONDENSER
VENDOR SS/SS
SIZE 140 SQ. FT.
HP
RPM
CAPACITY
TEMP
PRESS.

ED. NO. V-5307
TYPE VERTICAL
NAME HYDROLYSIS RECVR
VENDOR 316L SS
SIZE 36"
HP 600
RPM 3007
CAPACITY 25 PSIG/PV
TEMP
PRESS.

ED. NO. P-5307
TYPE CENTRIFUGAL
NAME HYDROLYSIS RECVR PUMP
VENDOR CHESTER
MATERIAL 316L SS
SIZE 3/4" 1/2" x 1/2"
HP 1750
RPM 1750
CAPACITY 50 GPM
TEMP 120°F
PRESS. 100 FT



INSTALL 45° SPLASH LED DIRECTING FLOW AGAINST VESSEL WALL

INTERLOCK LOGIC

- 1. FV-0708 CLOSING ON HIGH LEVEL
- 2. FV-0717 OPENING ON HIGH LEVEL

NO.	REVISIONS	DATE	BY	APPROVED
1	AS SHOWN	11/20/92	AS SHOWN	11/20/92
2	REVISION	11/20/92	REVISION	11/20/92
3	REVISION	11/20/92	REVISION	11/20/92
4	FOR DISPELLING	11/20/92	FOR DISPELLING	11/20/92

CEDAR CHEMIC CORPORATION
AVANTIS CYCLANOLIDE PIPING & INSTRUMENTATION OF HYDROLYSIS DISTILLATION
 S-803-06

EQ. NO. P-5103B
TYPE DIAPHRAGM PUMP
NAME F.A. PUMP
VENDOR WILCO
MATL SS
SIZE 1/2" x 1/2"
HP 1/2
RPM 1750
CAPACITY 3000 GAL
TEMP 10 C
PRES. ATM

EQ. NO. R-5103
TYPE REACTOR
NAME PRECIPITATION
VENDOR O
MATL QLS
SIZE 30" x 5"
HP N/A
RPM N/A
CAPACITY 3000 GAL
TEMP 60 C
PRES. ATM

EQ. NO. A-5103
TYPE AGT
NAME PRECIPITATION
VENDOR O
MATL 316 SS
SIZE 1/2" x 1/2"
HP 1/2
RPM 1750
CAPACITY N/A
TEMP 60 C
PRES. ATM

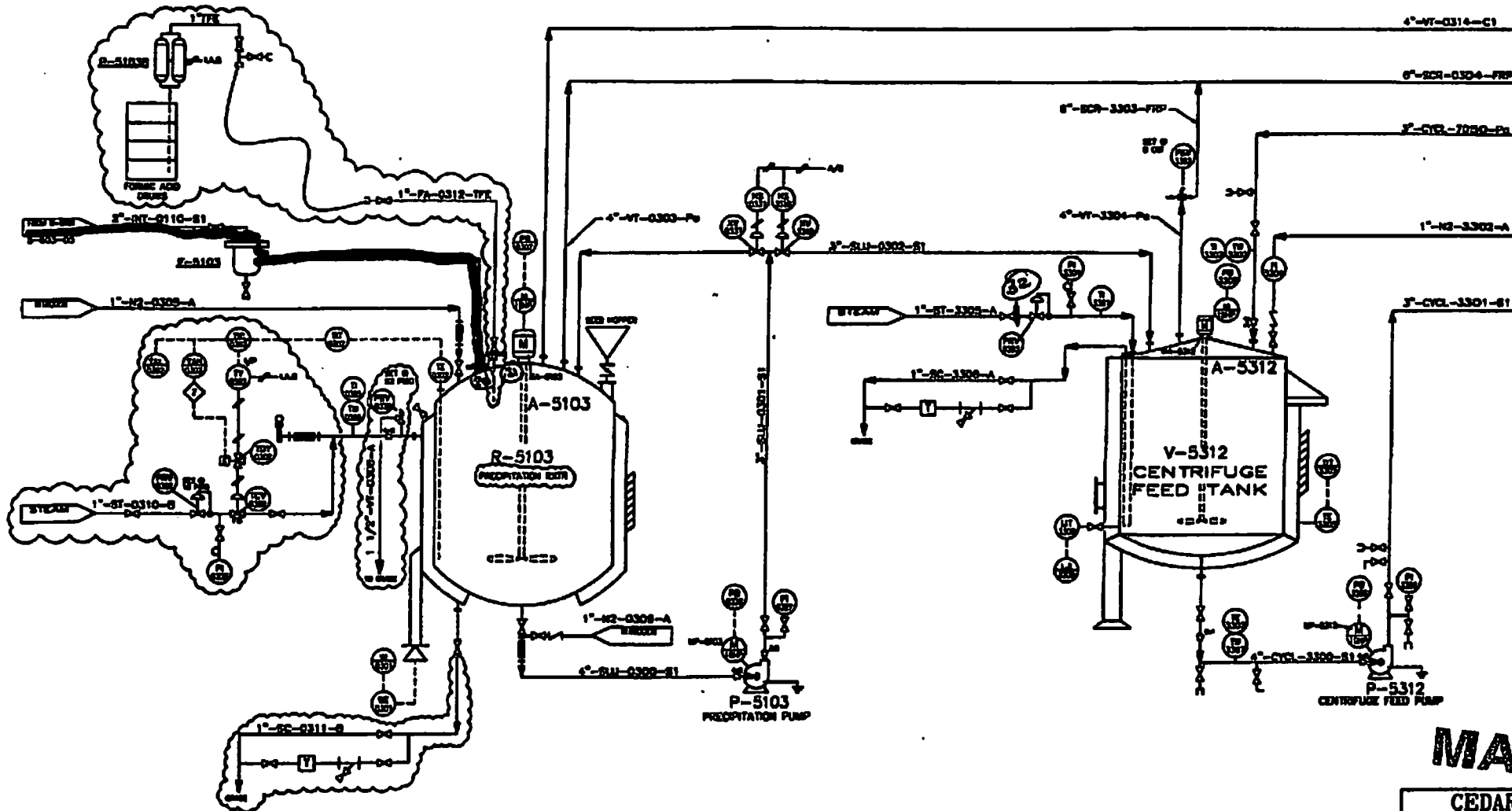
EQ. NO. P-5103
TYPE SLURRY PUMP
NAME PRECIPITATION PUMP
VENDOR DURCO
MATL 316 SS
SIZE 3" x 2" x 10/70
HP 10
RPM 1750
CAPACITY 200 GPM
TEMP 10 C
PRES. 65" TDH

EQ. NO. F-5103
TYPE BAG FILTER
NAME FILTER
VENDOR O
MATL 316 SS
SIZE 200 MICRON
HP N/A
RPM N/A
CAPACITY 200 GPM
TEMP 10 C
PRES. ATM

EQ. NO. V-5312
TYPE TANK
NAME CENTRIFUGE FEED TANK
VENDOR O
MATL SS
SIZE 9'0" x 6'-3"
HP N/A
RPM N/A
CAPACITY 5000 GAL
TEMP 10 C
PRES. ATM

EQ. NO. P-5312
TYPE PUMP
NAME CENTRIFUGE FEED PUMP
VENDOR DURCO
MATL 316 SS
SIZE 3" x 2" x 10/90
HP 10
RPM 1750
CAPACITY 200 GPM
TEMP 10 C
PRES. 50" TDH

EQ. NO. F-5312
TYPE BAG FILTER
NAME FILTER
VENDOR O
MATL 316 SS
SIZE 200 MICRON
HP N/A
RPM N/A
CAPACITY 200 GPM
TEMP 10 C
PRES. ATM



INTERIOR LEGS
2. 120-1308 CLOSED ON HIGH TEMP

NO.	REVISION	DATE	BY	CHKD	APP'D
1	AS BUILT	11/20/03	ALM	WST	
2	GENERAL REVISION	12/18/03	ALM	WST	
3	GENERAL REVISION	8/1/03	WST		
4	FOR EXISTING	4/4/03	WST		

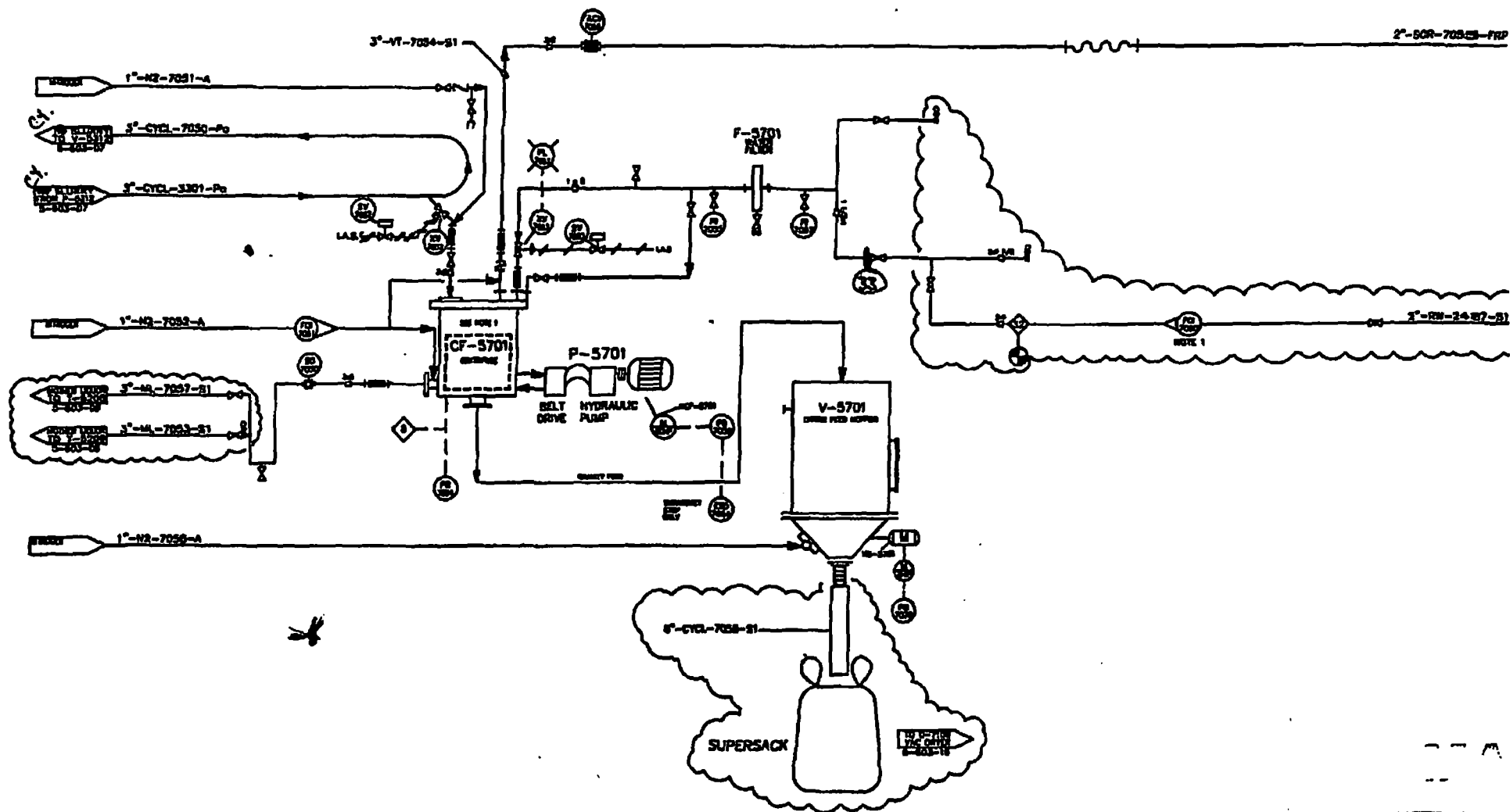
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PRECIPITATION	
DATE	NO.
NONE	5-603

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ED. NO. CF-5701
TYPE CENTRIFUGE
NAME SHARPLIN
MATL 304 SS
SIZE 48" x 30"
HP 80
RPM 900
CAPACITY 18 CU. FT.
TEMP 10 C
PRES. ATM

ED. NO. F-5701
TYPE CARTRIDGE
NAME WATER FILTER
VENDOR COMMERCIAL FILTERS
MATL PLASTIC MODEL 855320-1/430
SIZE 3" DIA x 25"
HP N/A
RPM N/A
CAPACITY 0
TEMP 175 PS @ 200 F
PRES. 150 PS @ 250 F

ED. NO. V-5701
TYPE HOPPER
NAME ORVER FEED HOPPER
VENDOR 0
MATL 304 SS
SIZE 70" x 4"
HP 2
RPM N/A
CAPACITY 25 CU. FT.
TEMP AMB.
PRES. ATM



INTERLOCK LOGIC
IF CF-5701 WILL SHUT DOWN WHEN OUT OF BALANCE.

NOTE
1. ACCESSIBLE FROM CENTRIFUGE

REV	DESCRIPTION	DATE	BY	CHKD	APPROVED
1	AS BUILT	11/20/88	ALN	WSP	
2	GENERAL REVISION	10/18/89	ALN	WSP	
3	GENERAL REVISION	9/12/89	WSP		
4	FOR DOWNGRADING	12/12/88	WSP		

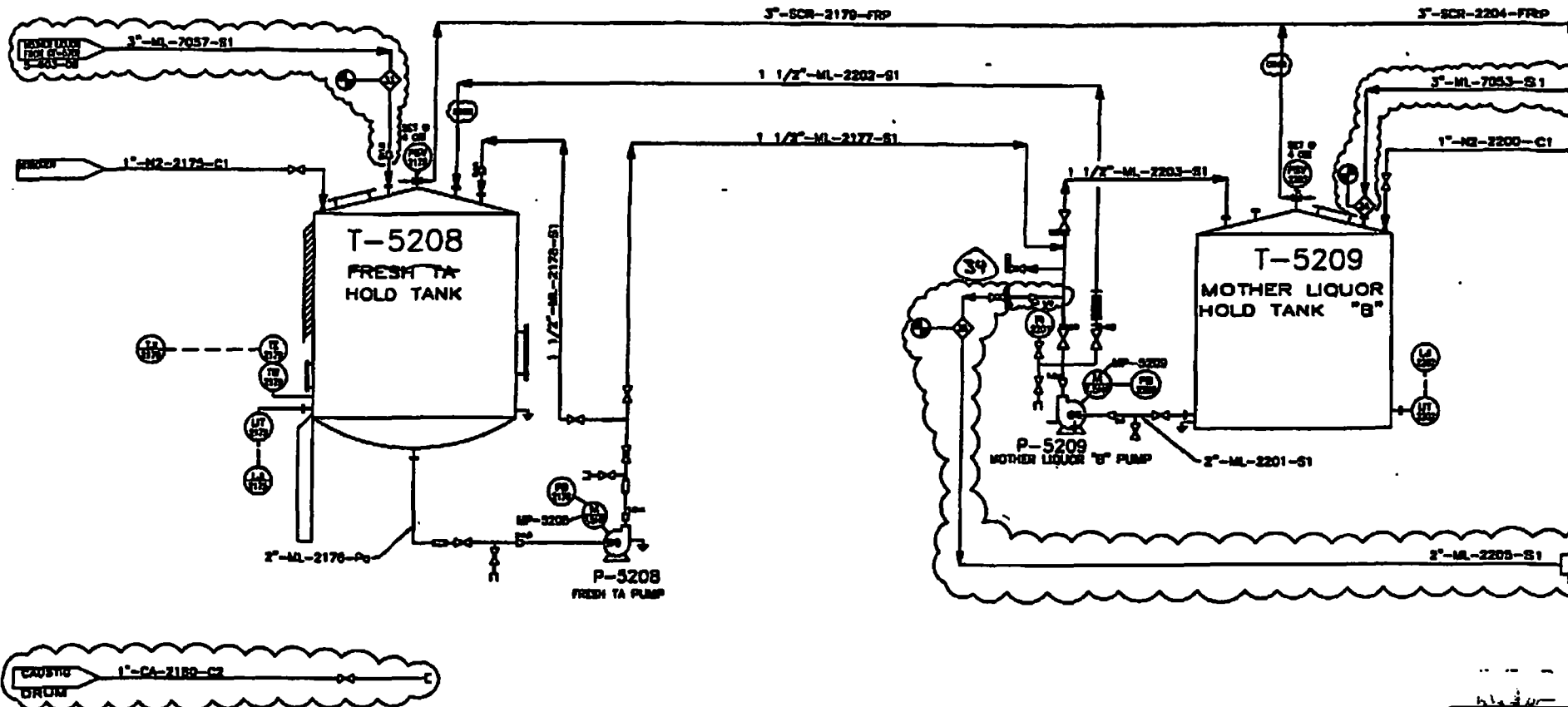
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NONE 3-603-

EQ. NO. T-5208
TYPE TANK
NAME FRESH TA HOLD
VENDOR C
MATL 316 SS
SIZE 9'0" x 6'
HP N/A
RPM N/A
CAPACITY 4000 GAL
TEMP 80 C
PRESS ATM

EQ. NO. P-5208
TYPE PUMP
NAME FRESH TA
VENDOR DUNCO
MATL 316 SS
SIZE 1.5 x 1-8/70
HP 7.5
RPM 3600
CAPACITY 10 GPM
TEMP 80 C
PRESS 250' TDM

EQ. NO. T-5209
TYPE TANK
NAME MOTHER LIQUOR HOLD
VENDOR C
MATL 304 SS
SIZE 7'-0"0 x 14'-0"
HP N/A
RPM N/A
CAPACITY 4000 GAL
TEMP AMS
PRESS ATM

EQ. NO. P-5209
TYPE PUMP
NAME MOTHER LIQUOR
VENDOR DUNCO
MATL 316 SS
SIZE 1.5 x 1-8/74
HP 7.5
RPM 1750
CAPACITY 10 GPM
TEMP AMS
PRESS 80' TDM



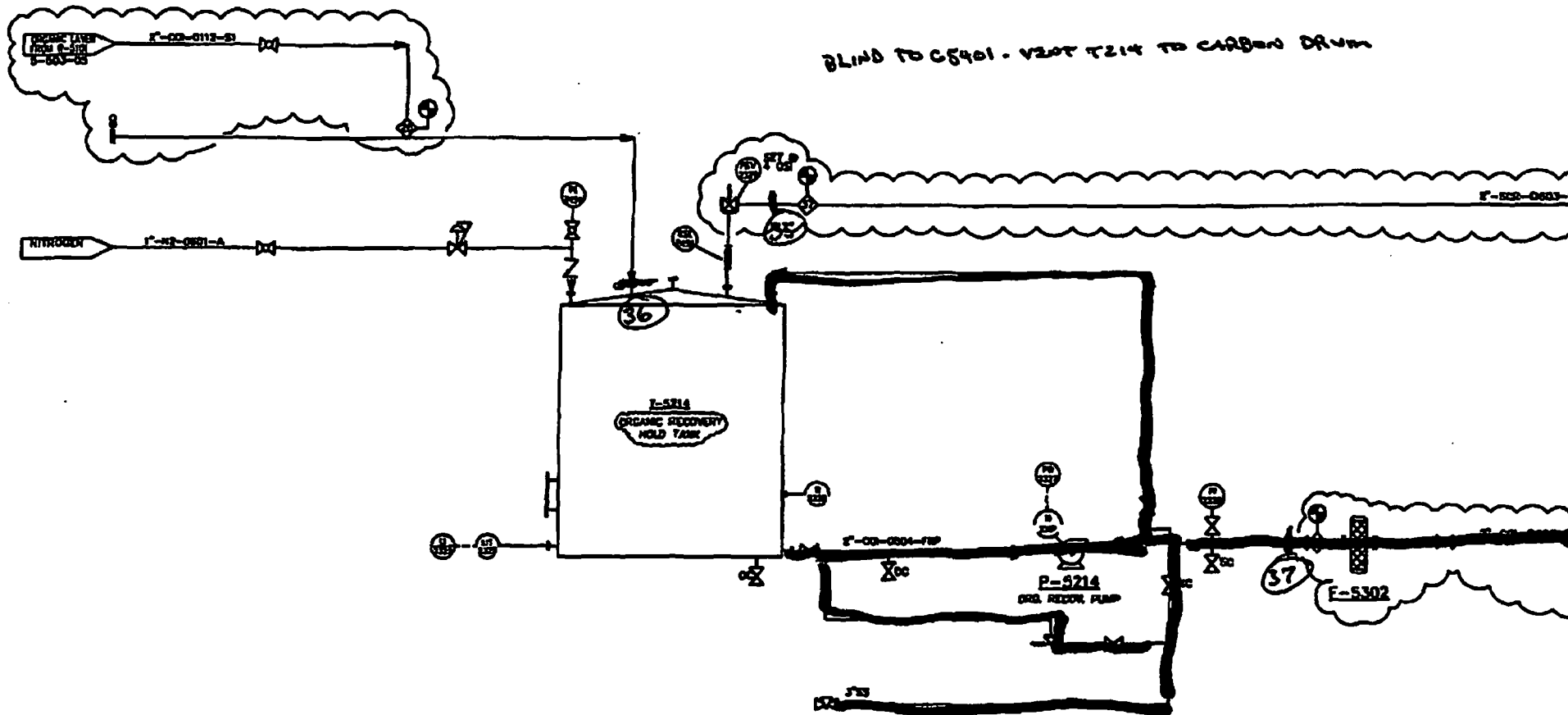
NO.	REVISION	DATE	BY	CHKD	APPD	DESCRIPTION
1	AS BUILT	11/29/00	ALB	WHE		CHG
2	GENERAL REVISION	10/18/00	ALB	WHE		CHG
3	GENERAL REVISION	8/19/00	WHE			CHG
4	FOR DECOMMISSION	8/8/00	WHE			CHG

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EQ. NO. T-5214
 TITLE ORG. RECON. HOLD TANK
 TYPE VERTICAL
 VENDOR CS LIND
 MATL CS
 SIZE 60
 HP 0
 RPM 0
 CAPACITY 17,000 GAL
 TEMP 0
 PRESS 0

EQ. NO. P-5214
 TITLE ORG. RECON. PUMP
 TYPE CENTRIFUGAL
 VENDOR BIRCHARD MARK I
 MATL CS
 SIZE 3 X 1.5 - 8
 HP 1800
 RPM 1400
 CAPACITY 140 GPM
 TEMP 0
 PRESS 100' TGM

EQ. NO. F-5302
 TITLE ORG. RECON. PUMP
 TYPE CARTRIDGE
 VENDOR 330 SS
 MATL 330 SS
 SIZE 100 INCHES
 HP 0
 RPM 0
 CAPACITY 0
 TEMP 0
 PRESS 0



NO.	REVISION	DATE	BY	CHKD	APPD	DESCRIPTION
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EQ. NO. P-5105
TYPE PUMP
NAME SOLV. REC. WASTE PUMP
VENDOR DURCO
MATL 316 SS
SIZE 3 x 1.5-8/74
HP 3
RPM 1750
CAPACITY 100 GPM
TEMP 100 C
PRES. 50' TDH

EQ. NO. R-5105
TYPE REACT.
NAME SOLV. REC. POT
VENDOR O
MATL CLS
SIZE 8'-0" x 8'-3"
HP N/A
RPM N/A
CAPACITY 4000 GAL
TEMP 100 C
PRES. ATM

EQ. NO. E-5105
TYPE EXCH.
NAME SOLV. REC. COND.
VENDOR O
MATERIAL 304 SS
SIZE 130 S.F.
HP N/A
RPM N/A
MM BTUH 0000
TEMP 65 C
PRES. 75 PSIG

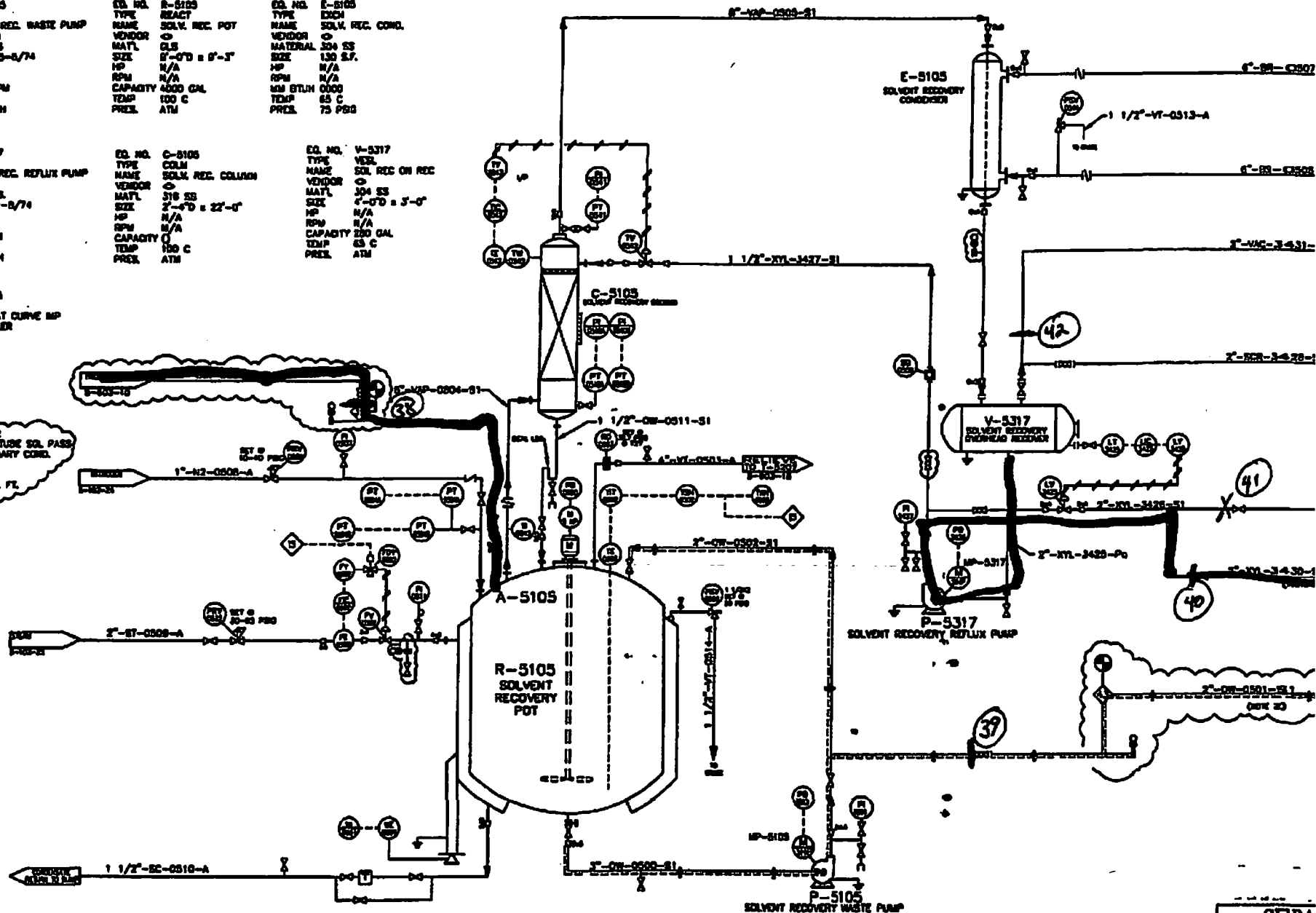
EQ. NO. P-5317
TYPE PUMP
NAME SOLV. REC. REFUX PUMP
VENDOR DURCO
MATL 316 S.S.
SIZE 1.5 x 1-8/74
HP 2
RPM 1750
CAPACITY 20 GPM
TEMP 50 C
PRES. 50' TDH

EQ. NO. C-5105
TYPE COLM.
NAME SOLV. REC. COLUMN
VENDOR O
MATL 316 SS
SIZE 2'-0" x 22'-0"
HP N/A
RPM N/A
CAPACITY 0
TEMP 100 C
PRES. ATM

EQ. NO. V-5317
TYPE VES.
NAME SOL. REC. ON REC.
VENDOR O
MATL 304 SS
SIZE 2'-0" x 5'-0"
HP N/A
RPM N/A
CAPACITY 200 GAL
TEMP 65 C
PRES. ATM

EQ. NO. A-5105
TYPE S2TW
NAME REDUCAT. CURVE MP
VENDOR FRAUGHER
MATL GLASS
SIZE 25
HP
RPM
CAPACITY
TEMP
PRES.

EQ. NO. E-5702
TYPE SHLL/TUBE SOL. PASS.
NAME RECOND. COND.
VENDOR O
MATL 304 SS
SIZE 100 SQ. FT.
HP
RPM
CAPACITY
TEMP
PRES.



REVISION LOG

1. EXISTING LINE
2. STREAM TRACE & REGULATE ALL CHD & (PDR) PUMP

NOTES

1. EXISTING LINE
2. STREAM TRACE & REGULATE ALL CHD & (PDR) PUMP

REVISION	DATE	BY	CHKD	APPD	DESCRIPTION
1	11/20/93	ALM	WSP		GENERAL REVISION
2	10/25/93	ALM	WSP		GENERAL REVISION
3	9/29/93	WSP			GENERAL REVISION

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WSP

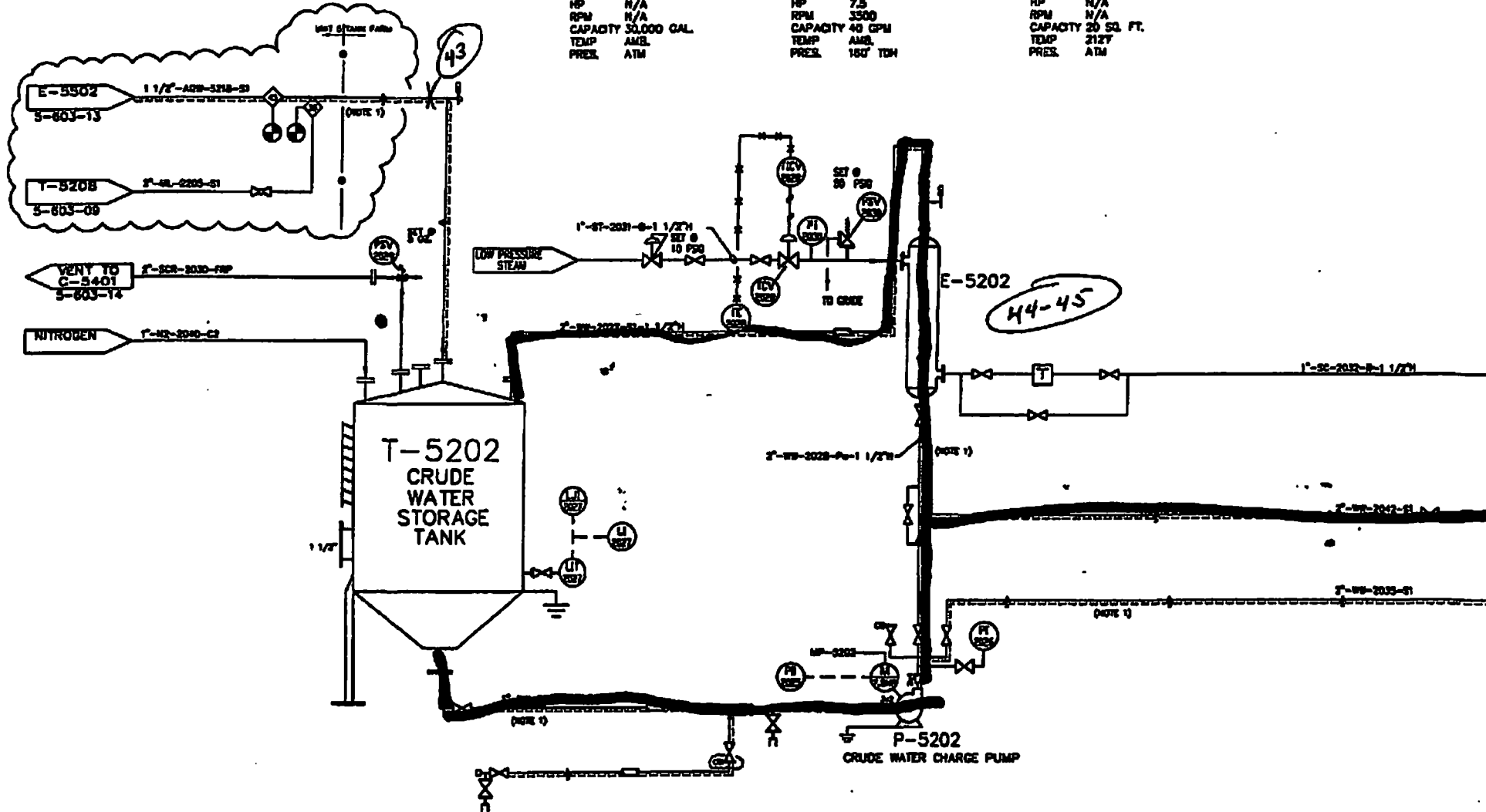
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STRIPPING &

NEW 11-92

EQ. NO. T-5202
 TYPE TANK
 NAME CRUDE WATER STG. TANK
 VENDOR
 MATL. 316SS
 SIZE 12' X 36'H
 HP N/A
 RPM N/A
 CAPACITY 30,000 GAL.
 TEMP AMB.
 PRES. ATM

EQ. NO. P-5202
 TYPE PUMP
 NAME CRUDE WATER CHG. PUMP
 VENDOR DUNCO
 MATL. 316 SS
 SIZE 1.5 X 1-6/8
 HP 7.5
 RPM 3500
 CAPACITY 40 GPM
 TEMP AMB.
 PRES. 180' TDH

EQ. NO. E-5202
 TYPE DOUBLE PIPE
 NAME CRUDE WATER STL. TANK HEATER
 VENDOR
 MATL. 316SS/C.S.
 SIZE N/A
 HP N/A
 RPM N/A
 CAPACITY 20 SQ. FT.
 TEMP 212°F
 PRES. ATM



NOTE:
 1) STEAM TRACING USED FOR FREEZE PROTECTION ONLY

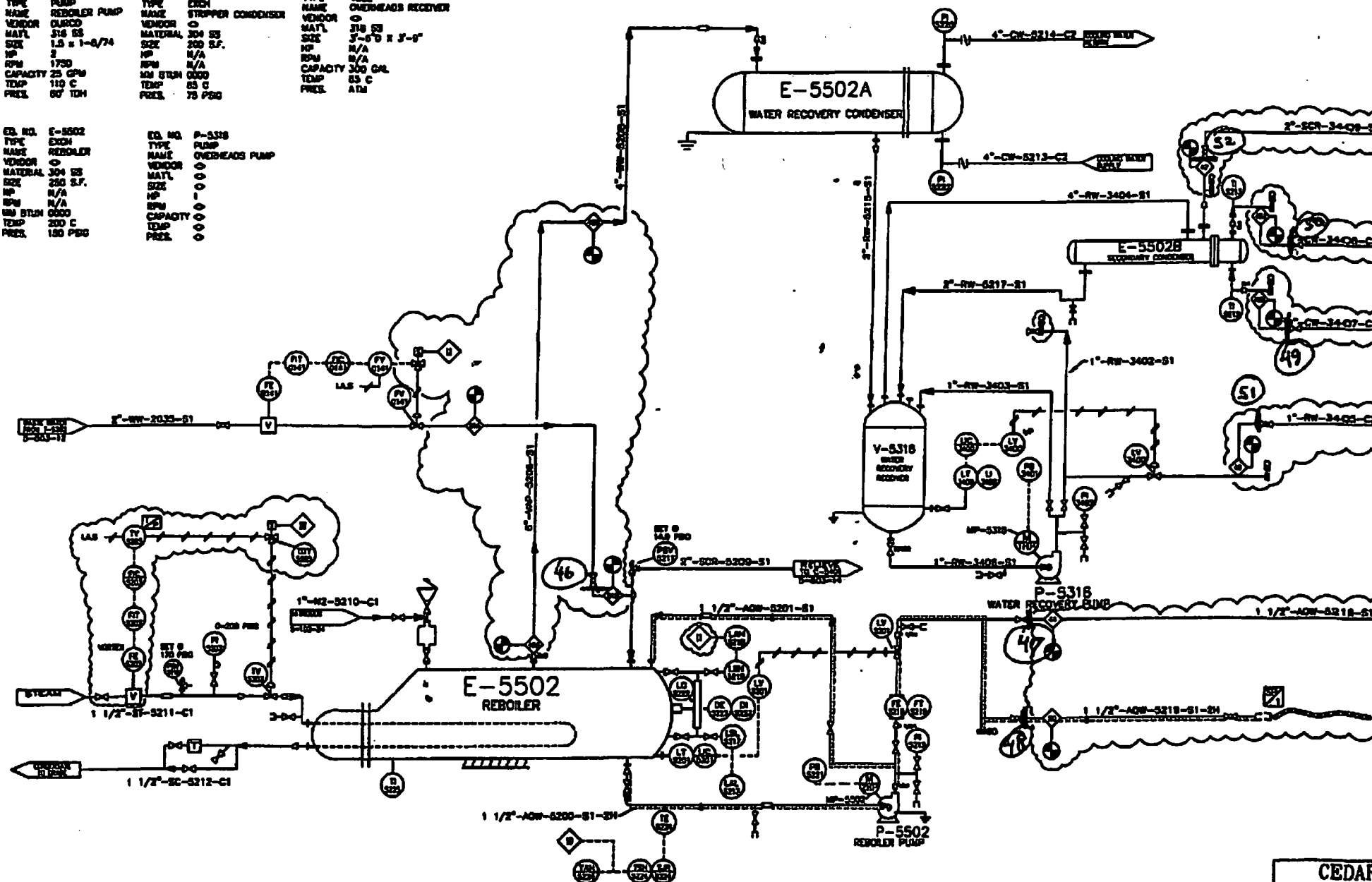
NO.	REVISIONS	DATE	BY	CHKD	APPR	DESCRIPTION
1						
2						
3						
4						
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 PIPING & INSTR
 RAW MATERIAL
 12/15/99
 12/15/99

EQ. NO. P-5502	EQ. NO. E-5502A	EQ. NO. V-5316
TYPE REBOILER PUMP	TYPE EXCH	TYPE OVERHEADS RECEIVER
VENDOR OIRCO	VENDOR O	VENDOR O
MATL 316 SS	MATERIAL 304 SS	MATL 316 SS
SIZE 1.5 x 1-8/74	SIZE 200 S.F.	SIZE 3'-6" x 3'-6"
HP 2	HP N/A	HP N/A
RPM 1750	RPM N/A	RPM N/A
CAPACITY 25 GPM	MM STD 0000	CAPACITY 300 GAL
TEMP 110 C	TEMP 85 C	TEMP 85 C
PRES. 80 TDH	PRES. 75 PSIG	PRES. ATM

EQ. NO. E-5502	EQ. NO. P-5316
TYPE REBOILER	TYPE PUMP
VENDOR O	VENDOR O
MATERIAL 304 SS	MATERIAL 304 SS
SIZE 250 S.F.	SIZE 250 S.F.
HP N/A	HP N/A
RPM N/A	RPM N/A
MM STD 0000	MM STD 0000
TEMP 200 C	TEMP 200 C
PRES. 150 PSIG	PRES. 150 PSIG



INTERLOCK LOGIC
 EQ. TV-5206 CLOSING ON HIGH TEMP (2127)
 EQ. PV-5207 CLOSING ON HIGH LEVEL

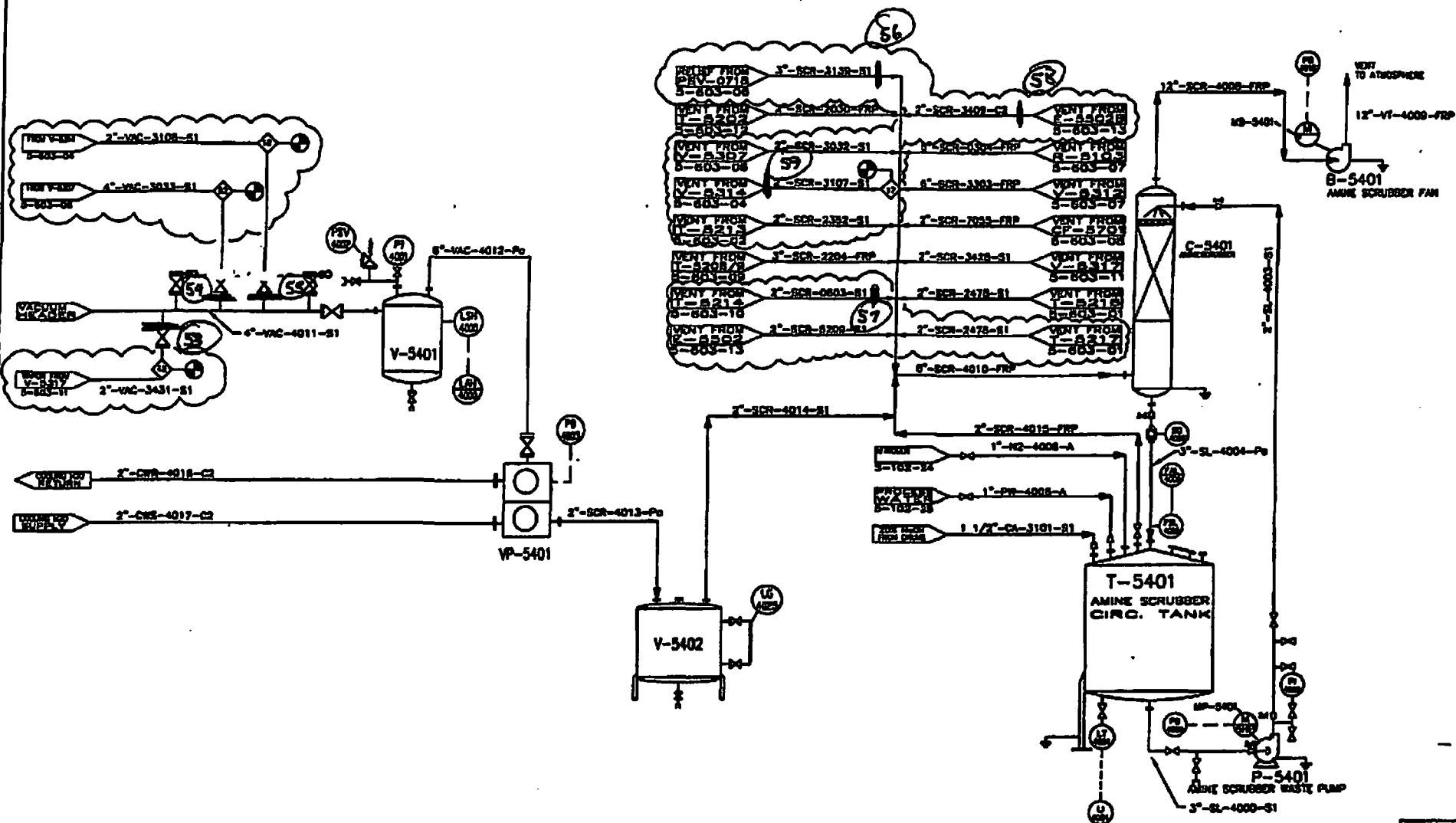
SP-1: 1 1/2" LEADING HOSE, CONVULSITED, 316 SS WITH INTEGRAL JACKET

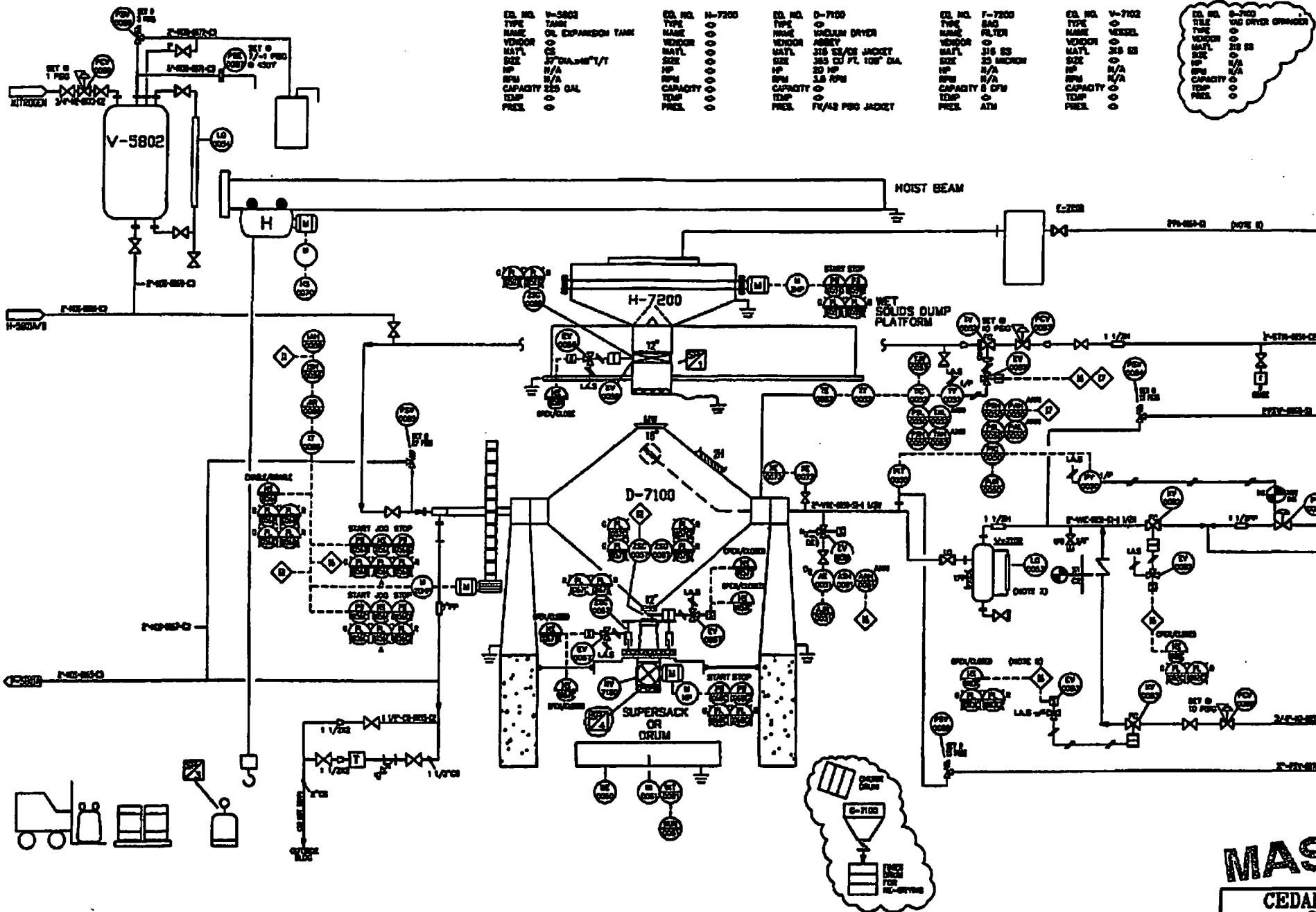
REVISION	DATE	BY	CHKD	APPD
1	11/25/80	ALM	SSB	
2	12/16/80	ALM	SSB	
3	8/10/80	TCC		
4	8/16/80			

AS BUILT	11/25/80	ALM	SSB	
GENERAL REVISION	12/16/80	ALM	SSB	
GENERAL REVISION	8/10/80	TCC		
FOR ENGINEERING	8/16/80			

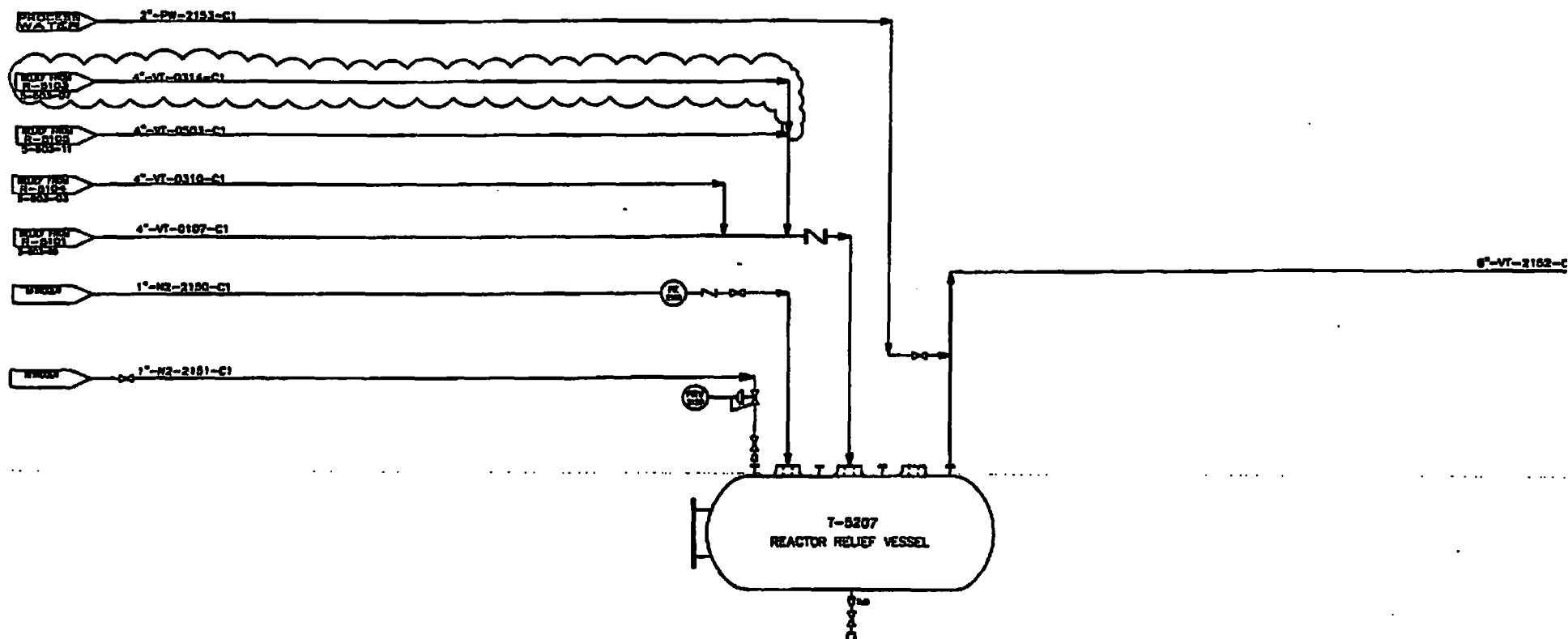
CEDAR
 CO
 MECH
 UT
 AVANTIS
 PIPING & INSTR
 WATER
 NONE
 5-603

ED. NO.	C-5402	
TYPE	COLUMB	
NAME	AMNE SCHUBERT	COLUM
VENDOR	○	
MATL	○	
SIZE	○	
HP	N/A	
RPM	N/A	
CAPACITY	○	
TEMP	○	
PRESS	○	

[illegible]



EQ. NO. T-5207
 TYPE VESSEL
 NAME REACTOR RELIEF VESSEL
 VENDOR Taylor - Forge
 MATL 316 SS
 SIZE 50" x 15'
 HP N/A
 RPM N/A
 CAPACITY 2200 GAL
 TEMP 40 C
 PRES. 1100 PSIG



MAS

REVISIONS				DATE				BY				CHECKED			
1	AS BUILT			11/20/00	ALB	MSR									
2	GENERAL REVISIONS			5/5/00	100										
3	FOR DISCLOSURE			4/4/00	100	MSR	MSR								

CEDAF CH VESSEL LI				AVENTIS PIPING & INSTR VENT CONDENS				NONE 5-503			
------------------------------------	--	--	--	--	--	--	--	---------------	--	--	--



Aventis CropScience

December 7, 2000

Ms. Lisa Walker
c/o Cedar Chemical
49 Phillips Road 311
Helena, AR 72342

Dear Lisa:

Enclosed is a Routing guide for Aventis CropScience shipments that will be shipped from Cedar Chemical. Please forward this to the appropriate individual if you are not responsible for shipments from Cedar Chemical.

The Guide has four sections:

- 1) Carrier List
- 2) LTL Routing Guide
- 3) Truckload Routing Guide
- 4) Small Package Carrier Section

The Carrier List shows all carriers approved for use from Gray Distribution. The other sections must be consulted to determine when each carrier may be used.

The LTL Routing Guide shows two or three carriers for each state. Carriers are shown in order of preference and must be called in order shown. Use the 2nd or 3rd option carriers only when absolutely necessary. Generally an LTL shipment is one weighing 16,000 pounds or less. Sometimes more than 16,000 pounds can be shipped LTL. Please call if you need to discuss shipments in the 16,000 – 18,000 pound range.

The Truckload Routing Guide shows the carriers listed in order of lowest to highest cost for each destination state. The carriers should be called in order as listed to minimize the cost to Aventis CropScience.

The Small Package Carrier Section shows the carriers approved for small package shipments.

Please call me at (919) 549-2298 if you have questions.

Sincerely,

A handwritten signature in cursive script that reads 'Mary M. Scotton'.
Mary M. Scotton

**Cedar Chemical
CARRIER LISTING**

CARRIER	CARRIER CODE	CARRIER TYPE SERVICE AREA	CONTACT	TELEPHONE
A. I. TRANSPORTATION	AITP	TL\TL NICHE REGIONAL	DAVID MOORE	901-346-7455
AMERICAN FREIGHTWAYS	ARFW	LTL CORE REGIONAL	LOCAL TERMINAL	
ANDERSON TRUCKING SERVICE	ANMN	TL CORE NATIONWIDE		800-854-3322
AVERITT EXPRESS	AVRT	LTL CORE REGIONAL	LOCAL TERMINAL	
BURLINGTON MOTOR CARRIERS	BMTR	TL CORE NATIONWIDE	DENISE STIGLER	800-933-7483
CON-WAY CENTRAL EXPRESS	CWCE	LTL CORE REGIONAL	LOCAL TERMINAL	
CONWAY SOUTHERN EXPRESS	CWSE	LTL CORE REGIONAL	LOCAL TERMINAL	
EMPIRE EXPRESS	EPXP	TL CORE NATIONWIDE	TONYA GLASS	800-851-0151 X102
EMPIRE EXPRESS	EPXP	TL CORE NATIONWIDE	KEN TANKERSLEY	800-851-0152
FEDERAL EXPRESS	FDE	SMALL PKG NATIONWIDE	LOCAL TERMINAL	
OVERNITE TRANSPORTATION CO	OVNT	LTL CORE NATIONWIDE	LOCAL TERMINAL	
RANGER TRANSPORTATION	LRGR	TL NICHE NATIONWIDE	CHERYL ROBINSON	800-872-9441
ROADWAY EXPRESS	RDWY	LTL CORE NATIONWIDE	LOCAL TERMINAL	
SAIA	SAIA	LTL CORE REGIONAL	LOCAL TERMINAL	
SOUTHEASTERN FREIGHTLINES	SEFL	LTL CORE REGIONAL	LOCAL TERMINAL	
SOUTHERN AG CARRIERS	SAGQ	TL NICHE REGIONAL	CINDY COFFEY	800-700-6521
SWIFT TRANSPORTATION	SWFT	TL CORE NATIONWIDE	TRUDY MOSS	800-800-7800
TRANS-CARRIERS	TCAR	TL NICHE NATIONWIDE	JENNY	800-627-1824
UNITED PARCEL SERVICE	UPSN	SMALL PKG NATIONWIDE	LOCAL TERMINAL	
YELLOW FREIGHT SYSTEM	YFSY	LTL CORE NATIONWIDE	LOCAL TERMINAL	

**Cedar Chemical
LTL Routing Guide**

<u>State</u>	<u>Carrier 1</u>	<u>Carrier 2</u>	<u>Carrier 3</u>
Alabama	American	Saia	
Arizona	Roadway	Yellow	Overnite
Arkansas	American	Saia	
California	Roadway	Yellow	Overnite
Colorado	American	Yellow	Roadway
Connecticut	Estes	Yellow	Roadway
Delaware	American	Yellow	Overnite
Florida	American	Yellow	
Georgia	American	Saia	
Idaho	Yellow	Roadway	
Illinois	American	Yellow	Roadway
Indiana	American	Yellow	Roadway
Iowa	American	Yellow	Roadway
Kansas	American	Yellow	Roadway
Kentucky	American	Yellow	Roadway
Louisiana	American	Saia	Merchants
Maine	Estes	Yellow	Roadway
Maryland	American	Yellow	
Massachusetts	Estes	Yellow	Roadway
Michigan	Yellow	Roadway	Overnite
Minnesota	American	Yellow	
Mississippi	American	Saia	
Missouri	American	Yellow	Roadway
Montana	Yellow	Roadway	

**Cedar Chemical
LTL Routing Guide**

Nebraska	American	Yellow	Roadway
Nevada	Yellow	Roadway	
New Hampshire	Yellow	Roadway	
New Jersey	Estes	Yellow	Roadway
New Mexico	American	Yellow	Overnite
New York	Estes	Yellow	Roadway
North Carolina	American	Yellow	
North Dakota	Yellow	Roadway	
Ohio	American	Yellow	Roadway
Oklahoma	American	Yellow	Roadway
Oregon	Yellow	Roadway	
Pennsylvania	Estes	Yellow	Roadway
Rhode Island	Estes	Yellow	Roadway
South Carolina	American	Yellow	
South Dakota	Yellow	Roadway	
Tennessee	American	Saia	
Texas	American	Yellow	Roadway
Utah	Roadway	Yellow	
Vermont	Estes	Yellow	Roadway
Virginia	American	Roadway	Overnite
Washington	Yellow	Roadway	
West Virginia	American	Yellow	Roadway
Wisconsin	American	Yellow	Roadway
Wyoming	Yellow	Roadway	

**Cedar Chemical
Truckload Routing Guide**

State	Rank	Carriers
Alabama	1	Trans-Carriers
Alabama	2	Swift Transportation
Alabama	3	Ranger Transportation
Alabama	4	Empire Express Continuous
Alabama	5	Southern Ag Carriers
Alabama	6	Burlington Motor Carriers
Alabama	7	Empire Express
Alabama	8	Anderson Trucking Service
Arizona	1	Swift Transportation
Arizona	2	Empire Express Continuous
Arizona	3	Ranger Transportation
Arizona	4	Empire Express
Arizona	5	Trans-Carriers
Arizona	6	Anderson Trucking Service
Arkansas	1	A I Transportation <130 miles
Arkansas	1	Southern Ag Carriers >130 miles
Arkansas	2	Empire Express >130 miles
California	1	Trans-Carriers
California	2	Swift Transportation
California	3	Empire Express Continuous
California	4	Anderson Trucking Service
California	5	Empire Express
California	6	Ranger Transportation
Colorado	1	Ranger Transportation
Colorado	2	Empire Express Continuous
Colorado	3	Swift Transportation
Colorado	4	Empire Express
Colorado	5	Trans-Carriers
Colorado	6	Anderson Trucking Service
North Florida	1	Ranger Transportation
North Florida	2	Empire Express Continuous
North Florida	3	Burlington Motor Carriers
North Florida	4	Empire Express
North Florida	5	Southern Ag Carriers

**Cedar Chemical
Truckload Routing Guide**

North Florida	6	Trans-Carriers
North Florida	7	Anderson Trucking Service
North Florida	8	Swift Transportation
Georgia	1	Trans-Carriers
Georgia	2	Ranger Transportation
Georgia	3	Swift Transportation
Georgia	4	Anderson Trucking Service
Georgia	5	Empire Express Continuous
Georgia	6	Empire Express
Georgia	7	Southern Ag Carriers
Georgia	8	Burlington Motor Carriers
Idaho	1	Swift Transportation
Idaho	2	Ranger Transportation
Idaho	3	Empire Express Continuous
Idaho	4	Empire Express
Idaho	5	Trans-Carriers
Idaho	6	Anderson Trucking Service
Illinois	1	Anderson Trucking Service
Illinois	2	Swift Transportation
Illinois	3	Trans-Carriers
Illinois	4	Empire Express Continuous
Illinois	5	Ranger Transportation
Illinois	6	Empire Express
Illinois	7	Burlington Motor Carriers
Indiana	1	Burlington Motor Carriers
Indiana	2	Trans-Carriers
Indiana	3	Swift Transportation
Indiana	4	Empire Express Continuous
Indiana	5	Anderson Trucking Service
Indiana	6	Ranger Transportation
Indiana	7	Empire Express
Iowa	1	Anderson Trucking Service

**Cedar Chemical
Truckload Routing Guide**

Iowa	2	Empire Express Continuous
Iowa	3	Burlington Motor Carriers
Iowa	4	Swift Transportation
Iowa	5	Ranger Transportation
Iowa	6	Empire Express
Iowa	7	Trans-Carriers
Kansas	1	Empire Express Continuous
Kansas	2	Trans-Carriers
Kansas	3	Swift Transportation
Kansas	4	Empire Express
Kansas	5	Anderson Trucking Service
Kansas	6	Burlington Motor Carriers
Kansas	7	Ranger Transportation
Louisiana	1	A I Transportation <130 miles
Louisiana	1	Southern Ag Carriers >130 miles
Louisiana	2	Empire Express >130 miles
Maryland	1	Ranger Transportation
Maryland	2	Anderson Trucking Service
Maryland	3	Empire Express Continuous
Maryland	4	Trans-Carriers
Maryland	5	Swift Transportation
Maryland	6	Empire Express
Maryland	7	Burlington Motor Carriers
Minnesota	1	Anderson Trucking Service
Minnesota	2	Swift Transportation
Minnesota	3	Burlington Motor Carriers
Minnesota	4	Empire Express Continuous
Minnesota	5	Ranger Transportation
Minnesota	6	Empire Express
Minnesota	7	Trans-Carriers
Mississippi	1	A I Transportation <130 miles
Mississippi	1	Southern Ag Carriers >130 miles
Mississippi	2	Empire Express >130 miles

**Cedar Chemical
Truckload Routing Guide**

Missouri	1	A I Transportation <130 miles
Missouri	1	Southern Ag Carriers >130 miles
Missouri	2	Empire Express >130 miles
Nebraska	1	Empire Express Continuous
Nebraska	2	Empire Express
Nebraska	3	Swift Transportation
Nebraska	4	Trans-Carriers
Nebraska	5	Burlington Motor Carriers
Nebraska	6	Ranger Transportation
Nebraska	7	Anderson Trucking Service
New Jersey	1	Ranger Transportation
New Jersey	2	Anderson Trucking Service
New Jersey	3	Empire Express Continuous
New Jersey	4	Trans-Carriers
New Jersey	5	Swift Transportation
New Jersey	6	Empire Express
New Jersey	7	Burlington Motor Carriers
North Carolina	1	Swift Transportation
North Carolina	2	Anderson Trucking Service
North Carolina	3	Trans-Carriers
North Carolina	4	Ranger Transportation
North Carolina	5	Southern Ag Carriers
North Carolina	6	Empire Express Continuous
North Carolina	7	Burlington Motor Carriers
North Carolina	8	Empire Express
North Dakota	1	Trans-Carriers
North Dakota	2	Ranger Transportation
North Dakota	3	Empire Express Continuous
North Dakota	4	Empire Express
North Dakota	5	Anderson Trucking Service
North Dakota	6	Burlington Motor Carriers

**Cedar Chemical
Truckload Routing Guide**

North Dakota	7	Swift Transportation
Ohio	1	Anderson Trucking Service
Ohio	2	Trans-Carriers
Ohio	3	Empire Express Continuous
Ohio	4	Swift Transportation
Ohio	5	Ranger Transportation
Ohio	6	Empire Express
Ohio	7	Burlington Motor Carriers
Pennsylvania	1	Ranger Transportation
Pennsylvania	2	Anderson Trucking Service
Pennsylvania	3	Empire Express Continuous
Pennsylvania	4	Trans-Carriers
Pennsylvania	5	Swift Transportation
Pennsylvania	6	Empire Express
Pennsylvania	7	Burlington Motor Carriers
Tennessee	1	A I Transportation <130 miles
Tennessee	1	Southern Ag Carriers >130 miles
Tennessee	2	Empire Express >130 miles
Texas E of I35 & N of I37	1	Southern Ag Carriers
Texas E of I35 & N of I37	2	Empire Express Continuous
Texas E of I35 & N of I37	3	Ranger Transportation
Texas E of I35 & N of I37	4	Trans-Carriers
Texas E of I35 & N of I37	5	Empire Express
Texas E of I35 & N of I37	6	Swift Transportation
Texas E of I35 & N of I37	7	Anderson Trucking Service
Texas E of I35 & N of I37	8	Burlington Motor Carriers
Texas W of I35 & S of I37	1	Southern Ag Carriers
Texas W of I35 & S of I37	2	Ranger Transportation
Texas W of I35 & S of I37	3	Empire Express Continuous
Texas W of I35 & S of I37	4	Empire Express
Texas W of I35 & S of I37	5	Trans-Carriers
Texas W of I35 & S of I37	6	Swift Transportation
Texas W of I35 & S of I37	7	Burlington Motor Carriers

**Cedar Chemical
Truckload Routing Guide**

Texas W of I35 & S of I37	8	Anderson Trucking Service
Virginia	1	Southern Ag Carriers
Virginia	2	Ranger Transportation
Virginia	3	Empire Express Continuous
Virginia	4	Swift Transportation
Virginia	5	Anderson Trucking Service
Virginia	6	Empire Express
Virginia	7	Trans-Carriers
Virginia	8	Burlington Motor Carriers
Washington	1	Trans-Carriers
Washington	2	Swift Transportation
Washington	3	Empire Express Continuous
Washington	4	Anderson Trucking Service
Washington	5	Empire Express
Washington	6	Ranger Transportation
West Virginia	1	Empire Express Continuous
West Virginia	2	Ranger Transportation
West Virginia	3	Swift Transportation
West Virginia	4	Empire Express
West Virginia	5	Burlington Motor Carriers
West Virginia	6	Trans-Carriers
West Virginia	7	Anderson Trucking Service

**Cedar Chemical
Small Package**

United Parcel Service Surface small package

Federal Express Air small package

PACKING SLIP

JOB NUMBER: 208970

DATE: 12-11-00

CUSTOMER:

SHIP TO:

AVENTIS CROPSCIENCE
ATTN:

CEDAR CHEMICAL CORP. 64
49 PHILLIPS ROAD #311

DURHAM
27709

NC

HELENA
72342

AR.

P.O. NUMBER: 673702

THIS SHIPMENT CONTAINS

5375

CYCLANILIDE LABEL FOR CEDAR
ACS 123994A/3100 12/00

1 SKID @ 9 CTNS @ 540 1 @ 515

5375

TOTAL = 5375

WRITTEN BY:

JL

PACKED BY:

XX

SHIPPED BY:

AMERICAN FREIGHTWAYS

RECEIVED BY: _____

CONSIGNEE DELIVERY RECEIPT

Freight Bill # 0884358162 50 TNBR#:			CONSIGNEE CEDAR CHEMICAL 49 PHILLIPS RD 311 HWY 242 HELENA AR 72342			Trailer # FW862			SHIPPER GREEN PRINTING CO INC 101 LEXINGTON PKY LEXINGTON NC 27295		
Date: 12-12-00											
H/U	PCS	HM	DESCRIPTION	WGT-LBS	NMFC	PCF	CLASS	RATE	CHARGES		
	10		PO1# NS PRINTED MATTER 10 CTNS ON 1 SKID 000175 FUEL SURCHG LTL SHPT3.50% ** FAK RATES APPLIED **	308	161870-00		070				
1	10		FREIGHT CHARGES PREPAID	308							
* ANY ADDITIONAL SERVICES MAY RESULT IN ADDITIONAL CHARGES *				B/L #							
* CHARGES SUBJECT TO CHANGE *				NS							
Received by:				P.O. #							
Date: 12-15-00				NS							
Arrive:											
Depart:											
Delv. Driver: 36006				Driver #: 19830							
<input type="checkbox"/> DELV WITH S/W INTACT				<input checked="" type="checkbox"/> # of Skids Delv							
<input type="checkbox"/> CLEAR <input type="checkbox"/> SHORT <input type="checkbox"/> OVER <input type="checkbox"/> DAMAGE											
EXCEPTIONS: 10/20											

AF AMERICAN
Freightways

P.O. Box 840, Harrison, AR 72602-0840 (ARFW)

Phone: 800-447-8139 Page 1 of 1

AB0000028944

Customer	Product	Customer Contact	Phone Number	Potential			Y=Yes N=No P=Partial			Status		
				Ann. Volume Mlbs	Toll Price \$/lb	Ann. Sales M\$	Confidentiality Agreement	Tech Package	Written Proposal Made	Comments/Action Items	Target Date	Responsible Party
Aventis	Cyclanilide	Serge Rover	33-472-852920	230	3.64	1,201	Y	Y	Y	Start-up 11/00	Underway	J. Krusting
Mace	CS-1	Chris Kulp	215-628-2946	90	5.00	450	Y	Y	Y	Start-up 10/00	Underway	J. Siebert
Witco	H2	Bill Gilroy	304-652-8000	200-500	6.00	1200-3000	Y	Y	Y	Under development by Witco	3Q 2001	J. Krusting
PPG	Drying	Chris Kulp	215-628-2946	100	0.50	50	Y	Y	Y	Killed-too small	-	J. Mancini
Dead Sea	Oxy	Mattie Kessler	972-629-7645	1,000	2.00	2,000	Y	P	N	Under development by Dead Sea	3Q 2001	J. Mancini
Rhodia	Guerbet Alc.	Dave Armstrong	609-860-4189	300	3.00	900	Y	P	N	Dead	-	-
Ticona	PPS	Jack Yortle	908-622-7231	500	0.80	400	Y	Y	Y	Ticona must supply 2MM capex	-	J. Siebert
Tetra	Flame retardant	Art Patterson	281-364-4368	6,000	0.25	1,500	Y	Y	Y	Suing for capex	-	J. Pyrlgi
Orion	Neutralization	Rick Billings	281-773-8062	15,000	0.10	1,800	Y	Y	N	Dead	-	J. Siebert
ARC	Thiocarbamate	Bob Vitoux	281-932-0604	500	0.40	200	Y	N	N	Dead - price too low	-	-
PPG	DNCB	Dave Roberts	412-434-2276	2,640	0.27	712	N	N	N	Dead - price too low	-	-
Cyclac	Polymer	Gary Fahler	518-339-2147	-	per diam \$10,000	-	Y	Y	Y	Dead - Capex too high	-	-
GE	Nitration	Mimi Aquino	847-520-9600	500	per diam \$8,000	-	Y	Y	Y	Under Review	2Q 2001	J. Krusting
RiceCo	SuperWham	Stanley Bernard	901-684-6380	-	-	1,000 Savings	-	N	-	Under Review	2Q 2001	D. Malcolm
Internal	Metolachlor	Stanley Bernard	901-684-6380	-	-	-	-	Y	-	Waiting for Approval	3Q 2001	J. Krusting
Internal	Dichlorid	Stanley Bernard	901-684-6380	-	-	-	-	Y	-	Under Review	3Q 2001	J. Pyrlgi
Internal	1-Nitropropane	Geoffrey Pratt	901-684-6373	-	-	-	-	P	-	Under Review	3Q 2001	T. Dinculescu
Internal	Pendimethalin	Stanley Bernard	901-684-6380	-	4.00	-	-	Y	N	Under Review	1Q 2001	J. Pyrlgi
Internal	Baythroid	Stanley Bernard	901-684-6380	-	37.00	-	N	N	N	Under Review	1Q 2001	J. Krusting
Internal	Morphos	Stanley Bernard	901-684-6380	-	-	-	N	N	N	Under Review	1Q 2001	T. Dinculescu

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Revision 1

Raw Materials Acceptance Specs

Copy 2

Page # 1

Chemical	Supplier Name	City	State	Spec #
2,4 DCA, CYC	VARIOUS			910200

Test	Method	Type	Low	High	Description
2,4 DCA% COA			99.0000	100.0000	

Chemical	Supplier Name	City	State	Spec #
ACETIC ACID				910194

Chemical	Supplier Name	City	State	Spec #
ACETIC ACID	A AND W AMERICAS	CHARLESTON	SC	910058

Test	Method	Type	Low	High	Description
ACETIC % COA			96.5000	100.0000	ACETIC % 96.5 min

Chemical	Supplier Name	City	State	Spec #
ACETIC ANHYD	EASTMAN CHEMICAL CO.	KINGSPORT	TN	910090

Test	Method	Type	Low	High	Description
ANHYD % COA			99.5000	100.0000	99.5% min

Chemical	Supplier Name	City	State	Spec #
ACETIC ANHYD	HOECHST-CELANESE	PAMPA, TX	TX	910034

Test	Method	Type	Low	High	Description
ANHYD % COA			99.5000	100.0000	ANHYDRIDE %99.5 min

Chemical	Supplier Name	City	State	Spec #
ACETIC TRUCK	CONE SOLVENTS	MEMPHIS	TN	910108

Test	Method	Type	Low	High	Description
%PURITY coa			99.8500	100.0000	purity
ACETIC % COA			95.0000	99.9000	95-99.9%active

Chemical	Supplier Name	City	State	Spec #
ACETIC\FMC	CONE SOLVENTS	MEMPHIS	TN	910136

Test	Method	Type	Low	High	Description
% ACTIVE COA			95.0000	99.9000	% acetic acid active
%PURITY coa			99.8500	100.0000	purity for glacial acetic acid

Chemical	Supplier Name	City	State	Spec #
ACETONE	JLM INDUSTRIES	MT VERNON, INDIANA	IN	910057

Test	Method	Type	Low	High	Description
WATER % COA			0.0100	0.3000	0.3% water max

Chemical	Supplier Name	City	State	Spec #
ACETONE	IDEAL	MEMPHIS	TN	910058

Test	Method	Type	Low	High	Description
WATER % COA		N	0.0100	0.3000	WATER IN ACETONE 0.3% max

APPROVED

FEB 23 2001

BY: *[Signature]*

AB0000025772

Chemical	Supplier Name		City		State	Spec #
AGENT 1568-6	STEPAN		WINDER		GA	910064
Test	Method	Type	Low	High	Description	
PERFORMN	PROP-7		1.0000	3.0000	1 = fail, 2 = pass	
WATER %	GAM-2		0.0100	2.0000	.	

Chemical	Supplier Name		City		State	Spec #
AGNT X205615	STEPAN		WINDER		GA	910103
Test	Method	Type	Low	High	Description	
PERMFORN	PROP-7		1.0000	3.0000	PROPANIL EMULSION PERFORMANCE 1 = fail, 2 = pass	
WATER %	GAM-2		0.0100	2.0000	.	

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Raw Materials Acceptance Specs

Page # 2

Chemical	Supplier Name	City	State	Spec #
ALUM SULFATE	CONE SOLVENTS	MEMPHIS	TN	910133
Test	Method	Type	Low	High
WT % ALM COA			48.0000	52.0000

Chemical	Supplier Name	City	State	Spec #
ANHYD. HCL	VARIOUS			910094
Test	Method	Type	Low	High
%HCL-ANH from COA			99.0000	100.0000

% anhydrous HCL 99% min

Chemical	Supplier Name	City	State	Spec #
AU-522	ADJU. UNLLIM .3LB EMULS.	TULSA	OK	910043
Test	Method	Type	Low	High
PERFORMN PROP-7			1.0000	3.0000
WATER % GAM-2			0.0100	2.0000

1 = fail, 2 = pass.

Chemical	Supplier Name	City	State	Spec #
B AROMATICS	BASIS PETROLEUM	HOUSTON	TX	910021
Test	Method	Type	Low	High
B AROMAT COA			1.0000	3.0000

1 = not B grade, 2 = is B grade

Chemical	Supplier Name	City	State	Spec #
B AROMATICS	PHIBRO	HOUSTON	TX	910055
Test	Method	Type	Low	High
B AROMAT COA			1.0000	3.0000

1 = not B grade, 2 = is B grade

Chemical	Supplier Name	City	State	Spec #
B-ODCB				910004
Test	Method	Type	Low	High
%ODCB	na		98.0000	100.0000
%PDCB	na		0.0010	2.0000

Bayer ODCB 98.5%min odcb, 1% max pdcb

para

Chemical	Supplier Name	City	State	Spec #
BHT	VARIOUS			910126
Test	Method	Type	Low	High
ASH	COA		0.0001	0.0020
COLOR	COA		0.0010	5.0000
FREEZ PT	COA		0.0010	69.3000
MOISTURE	COA		0.0001	0.0500
PURITY	COA		99.0000	100.0000

ASH = 0.002 MAX, 2,6DI-TERT-BUTYL-PARA-CRESOL = BHT

APHA COLOR OF 10% SOLUTION = SMAX

69.2 C MINIMUM FREEZE POINT

0.05% MAX MOISTURE

2,6-DITERT-BUTYL PARA-CRESOL = BHT

Chemical	Supplier Name	City	State	Spec #
BROMINE	VARIOUS			910183

AB0000025772

Test	Method	Type	Low	High	Description
BROMIN %	COA		99.9000	100.0000	.

Chemical	Supplier Name	City	State	Spec #
BUTYL ALCOHL	SHELL CHEMICAL CO	DEER PARK	TX	910060

Test	Method	Type	Low	High	Description
BUTYL %	COA		99.0000	100.0000	99%min.

Chemical	Supplier Name	City	State	Spec #
CALC CHLORID	TETRA CHEMICALS	WEST MEMPHIS	AR	910062

Test	Method	Type	Low	High	Description
NO SPEC.	no specs		1.0000	3.0000	no specification required - 1=we reject, 2 = we accept.

02/23/01 07:25

Raw Materials Acceptance Specs

Page # 3

Chemical	Supplier Name	City	State	Spec #
CALCCHLR-FMC	VARIOUS			910154
Test Method Type Low High Description				
CACL2 % coa				34.0000 38.0000 .
CATALYST-DCA	JOHNSON MATTHEY	WEST DEPTFORD	NJ	910167
Test Method Type Low High Description				
ACTIVITY R&D				6.0000 12.0000 .
CATLYST-CYMP	VARIOUS			910151
Test Method Type Low High Description				
PALLADIM COA	G			5.0000 0.0000 .
CAUSTIC\FMC	CHEMTECH.	MEMPHIS	TN	910134
Test Method Type Low High Description				
% NAOH COA				49.0000 51.0000 .
CHLORINE\FMC	IDEAL	MEMPHIS	TN	910135
Test Method Type Low High Description				
CHLORINE COA				99.5000 100.0000 %chlorine
CPDM-CYCLAN	CREANOVA			910199
Test Method Type Low High Description				
DIMM % COA	L			1.0000 1.0000 .
DMF % COA	L			0.7500 0.7500 .
PURITY % COA	G			97.5000 0.0000 .
CYCLOHEXANE				910187
CYCLOHEXANE	CONE SOLVENTS	MEMPHIS	TN	910174
Test Method Type Low High Description				
% H2O COA				0.0100 0.1000 .
DCA	BAYER PRODUCTS	Pittsburgh	PA	910127
Test Method Type Low High Description				
% DCA COA				98.0000 100.0000 % DCA

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H2O PPM COA 0.0001 500.0000 Water in DCA

Chemical	Supplier Name	City	State	Spec #	
DCA	TOLOCHIMIE	TOULOUSE		910146	
Test	Method	Type	Low	High	Description
DCA %	COA		98.0000	100.0000	.
WATERPPM	COA		10.0000	1000.0000	.

Chemical	Supplier Name	City	State	Spec #	
DCA RM-PROCH	PROCHROM INC.	SALVADOR-BAHTI		910104	
Test	Method	Type	Low	High	Description
COA	COA		98.0000	100.0000	98%min., 500 ppm water max

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Chemical	Supplier Name	City	State	Spec #
DCP-DOVER	SCHNECTADY CHEMICAL			910163
Test	Method	Type	Low	High
ASSAY %	COA		95.0000	100.0000 .
H2O PPM	COA		0.0100	200.0000 .

Chemical	Supplier Name	City	State	Spec #
DCPD	BF GOODRICH	CALVERT CITY	KY	910125
Test	Method	Type	Low	High
C10, ACET	COA		0.0025	0.0055 C10%
DCPD %	COA	G	99.0000	100.0000 % DCPD
OXY'S	COA	L	0.0001	0.0025 0.0025% MAX
WATER	COA		0.0001	100.0000 100 PPM WATER MAX

Chemical	Supplier Name	City	State	Spec #
DCPD	KMTX	PORT ARTHUR	TX	910045
Test	Method	Type	Low	High
C10 ACET	COA		0.0025	0.0055 C10 %
DCPD %	COA	G	99.0000	100.0000 99%min
OXYS	COA	L	0.0001	0.0025 0.0025%MAX
WATER	COA		0.0001	100.0000 100 PPM MAX WATER

Chemical	Supplier Name	City	State	Spec #
DCPD	VARIOUS			910165
Test	Method	Type	Low	High
C10	COA		0.0025	0.0055 C10 ACETYLENES
DCPD	COA		99.0000	100.0000 %DCPD 99.0%MIN
OXY	COA		0.0001	0.0025 OXY 0.0025% MAX
WATER	COA		0.0001	100.0000 WATER 100 PPM MAX

Chemical	Supplier Name	City	State	Spec #
DCPI	TOLOCHIMIE	TOULOUSE		910031
Test	Method	Type	Low	High
DCPI %	COA		98.0000	100.0000 98%min

Chemical	Supplier Name	City	State	Spec #
DEAC	VARIOUS			910123
Test	Method	Type	Low	High
ALUMINUM	COA		21.9000	22.4000 DIETHYLALUMINUM CHLORIDE = DEAC
APPEAR	COA		0.0001	100.0000 TYPICAL, TYPICAL = 100
CHLORIDE	COA		29.2000	29.7000 CHLORIDE
CL/AL	COA		1.0000	1.0300 MOLAR RATIO
ETHANE	COA		98.0000	100.0000 ETHANE MOLAR%

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HYDROGEN COA	0.0001	0.2000	HYDROGEN MOLEAR% 0.2 MAX
IBUTANE COA	0.0001	0.2000	IBUTANE MOLAR % 0.2MAX
NBUTANE COA	0.0001	2.0000	2 % MAX NBUTANE MOLAR %

Chemical	Supplier Name	City	State	Spec #
DICNIL-CYMP	VARIOUS			910153
Test	Method	Type	Low	High
DICNIL % COA			0.0100	100.0000 .

Chemical	Supplier Name	City	State	Spec #
DIENE RUBBER	FIRESTONE	LAKE CHARLES	LA	910189
Test	Method	Type	Low	High
DIENE COA			1.1000	2.0000 BFG PREAPPROVES THIS MATERIAL.

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Chemical	Supplier Name	City	State	Spec #
MA	AIR PRODUCTS	DECATUR	AL	910068
Test	Method	Type	Low	High
%DMA	COA		99.0000	100.0000
				Description
				DMA 99%min

Chemical	Supplier Name	City	State	Spec #
MA	AIR PRODUCTS.	LEHIGH VALLEY	PA	910069
Test	Method	Type	Low	High
% DMA	COA		99.0000	100.0000
				Description
				dma 99% min

Chemical	Supplier Name	City	State	Spec #
MF	AIR PRODUCTS	DECATUR	AL	910033
Test	Method	Type	Low	High
DMF %	COA		99.9000	100.0000
				Description
				99.9% min, 500ppm water max
WATER %	COA		0.0100	0.0500
				.

Chemical	Supplier Name	City	State	Spec #
OPO-PENTABRM	DOW CHEMICAL	FREEPORT	TX	910179
Test	Method	Type	Low	High
DPO %	COA		99.0000	100.0000
				Description
				DPO %

Chemical	Supplier Name	City	State	Spec #
EDC	OCCIDENTAL CHEMICAL	BAYPORT	TX	910087
Test	Method	Type	Low	High
EDC %	COA		99.9400	100.0000
				Description
				99.95% min

Chemical	Supplier Name	City	State	Spec #
EDC	VARIOUS			910114
Test	Method	Type	Low	High
%EDC	COA		99.9400	100.0000
				Description
				EDC raw material for TA production

Chemical	Supplier Name	City	State	Spec #
EMULS-MOLNTE	WITCO	Houston	tx	910177
Test	Method	Type	Low	High
PERFORM	DICK FRA		0.0100	2.0000
				Description
				.

Chemical	Supplier Name	City	State	Spec #
EPAC	VARIOUS			910120
Test	Method	Type	Low	High
BFG OK'D	none		1.0000	3.0000
				Description
				1 = no / 2 = yes bfg approved

Chemical	Supplier Name	City	State	Spec #
ETHANOX 330	VARIOUS			910102

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Test	Method	Type	Low	High	Description
APPEAR	COA		10.0000	101.0000	APPEARANCE = WHITE TO LIGHT STRAW CRYSTALLS, 100 = YES
PURITY	COA		98.0000	100.0000	%PURITY
SETPOINT	COA		154.0000	2000.0000	154 MIN.

Chemical	Supplier Name	City	State	Spec #
ETHYLENE OXIDE	VARIOUS			910093

Test	Method	Type	Low	High	Description
%E.O.	from COA		99.5000	100.0000	99.5% min Ethylene Oxide, 300 PPM max water
%WATER	from COA		0.0100	0.0300	%moisture in EO

Chemical	Supplier Name	City	State	Spec #
MERCKIC CHLORIDE	VARIOUS			910182

Test	Method	Type	Low	High	Description
FECL %	COA		96.0000	100.0000	.
FERUS CL	COA		0.0100	3.0000	.
IMPURS %	COA		0.0100	1.0000	.

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Chemical	Supplier Name	City	State	Spec #
FMC STEP 4	FMC CORP APG	BALTIMORE	MD	910129
Test	Method	Type	Low	High
STEP 4	COA	N	0.0000	2.0000
Description				
CUSTOMER APPROVED PRODUCT =2, 1= NOT APPROVED				

Chemical	Supplier Name	City	State	Spec #
FMC-80-1				910149

Chemical	Supplier Name	City	State	Spec #
FORMALDEHYDE	NESTE RESINS	WINNFIELD	LA	910191

Test	Method	Type	Low	High	Description
FORM %	COA		44.5000	45.5000	FORMALDEHYDE
MEOH %	COA		4.5000	6.0000	.

Chemical	Supplier Name	City	State	Spec #
FORMALDEHYDE	GEORGIA PACIFIC	TAYLORSVILLE, MS	MS	910066

Test	Method	Type	Low	High	Description
FORM %	COA		44.5000	45.5000	44.5 - 45.5% formaldehyde / 4.5-6% Meoh
MEOH %	COA		4.5000	6.0000	.

Chemical	Supplier Name	City	State	Spec #
FORMALDEHYDE	SPURLOCK ADHESIVES			910065

Test	Method	Type	Low	High	Description
FORM %	COA		44.5000	45.5000	44.5 - 45.5 Formaldehyde, 4.5 - 6% Meoh
MEOH %	COA		4.5000	6.0000	.

Chemical	Supplier Name	City	State	Spec #
FORMIC, CYCLA	VARIOUS			910201

Test	Method	Type	Low	High	Description
FORMIC %	COA	G	85.0000	0.0000	.

Chemical	Supplier Name	City	State	Spec #
HCL	VULCAN	BIRMINGHAM	AL	910026

Test	Method	Type	Low	High	Description
HCL %	COA		31.5000	34.0000	31.5 - 34% HCL

Chemical	Supplier Name	City	State	Spec #
HCL (ANHYDR.)	VARIOUS			910106

Test	Method	Type	Low	High	Description
HCL/PURE	COA		99.0000	100.0000	99% Min. anhydrous for unit 5

Chemical	Supplier Name	City	State	Spec #
HEPTNE DIR	CONE SOLVENTS	MEMPHIS	TN	910083

Test	Method	Type	Low	High	Description
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WATER % COA 0.0100 0.1000 0.1% water max

Chemical	Supplier Name	City	State	Spec #	
IEPTNE BFG	CONE SOLVENTS	MEMPHIS	TN	910084	
Test	Method	Type	Low	High	Description
IBP D F. COA			195.0000	205.0000	initial boiling point
WATER % COA			0.0100	0.1000	.

Chemical	Supplier Name	City	State	Spec #	
HYDROGEN	PRAXAIR	MCINTOSH	AL	910086	
Test	Method	Type	Low	High	Description
HYDRO % COA			99.9000	100.0000	99.9% min.

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Chemical	Supplier Name	City	State	Spec #
IPA-CYMP	CONE SOLVENTS	MEMPHIS	TN	910150
Test	Method	Type	Low	High
IPA %	COA		99.0000	100.0000
Description: IPA FOR CYMP 99.0 MINIMUM				
Chemical	Supplier Name	City	State	Spec #
ISOMIBK STAM	CONE SOLVENTS	MEMPHIS	TN	910070
Test	Method	Type	Low	High
WATER %	COA		0.0100	0.4000
Description: 0.4% water max				
Chemical	Supplier Name	City	State	Spec #
ISOMIBK STAM	UNION CARBIDE	CHARLESTON	WV	910071
Test	Method	Type	Low	High
WATER %	COA		0.0100	0.4000
Description: 0.4% water max				
Chemical	Supplier Name	City	State	Spec #
ISOPHORONE	CONE SOLVENTS	MEMPHIS	TN	910038
Test	Method	Type	Low	High
WATER %	COA		0.0100	0.5000
Description: 0.5% water max				
Chemical	Supplier Name	City	State	Spec #
ISOPHORONE	UNION CARBIDE	CHARLESTON	WV	910067
Test	Method	Type	Low	High
WATER %	COA		0.0100	0.5000
Description: 0.5% water max				
Chemical	Supplier Name	City	State	Spec #
ISOPHORONE	ACETO AGRICULTURAL CHEMS.	Lake Success,	ny	910116
Test	Method	Type	Low	High
WATER, %	COA		0.0100	0.5000
Description: .				
Chemical	Supplier Name	City	State	Spec #
ISOPHORONE	VARIOUS			910112
Test	Method	Type	Low	High
WATER	coa		0.0010	0.5000
Description: 0.5% WATER MAX FROM COA				
Chemical	Supplier Name	City	State	Spec #
LIME	BRAVO LIME COMPANY	SAGINAW,	AL	910050
Test	Method	Type	Low	High
HYDRATED	COA		1.0000	3.0000
Description: Hydrated grade/ 1 = no, 2 = yes				
Chemical	Supplier Name	City	State	Spec #
M-680	CONE SOLVENTS	MEMPHIS	TN	910036
Test	Method	Type	Low	High
Description:				

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WATER % COA 0.0101 0.5000 0.5% water max

Chemical	Supplier Name	City	State	Spec #	
MESITYL OXD.	HOECHST-CERLANESE	PAMPA, TX	TX	910047	
Test	Method	Type	Low	High	Description
WATER % COA			0.0100	0.5000	0.5% water max

Chemical	Supplier Name	City	State	Spec #	
METHANOL	CHEMTECH	ST LOUIS,	MO	910113	
Test	Method	Type	Low	High	Description
MEOH % COA			99.0000	100.0000	99.0 % MINIMUM

WATER % GAM-2 0.0001 0.5000 .

Chemical	Supplier Name	City	State	Spec #
MOLINATE	HUNGARY			910178
Test	Method	Type	Low	High
MOLINT %	COA	G	96.0000	100.0000
Description				
MOLINATE %				

Chemical	Supplier Name	City	State	Spec #
MOLYB CAT.	VARIOUS			910118
Test	Method	Type	Low	High
BFG OK'D	none		1.5000	3.0000
Description				
1 = no / 2 = yes bfg approved				

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Chemical	Supplier Name	City	State	Spec #
MORPHOLINE	VARIOUS			910098
Test	Method	Type	Low	High
%MORPH	COA		99.0000	100.0000
Description %morpholine 99% min				
Chemical	Supplier Name	City	State	Spec #
N-PROPANOL	VARIOUS			910166
Test	Method	Type	Low	High
DIST.RNG	COA		96.0000	98.0000
Description distillation range of 96-98C max is only spec.				
Chemical	Supplier Name	City	State	Spec #
N-PROPYL ALC	CONE SOLVENTS	MEMPHIS	TN	910170
Test	Method	Type	Low	High
PURITY	dry base		99.9000	100.0000
WATER	by wt.		0.0001	0.1000
Description purity on dry basis (without water) water 0.1% max				
Chemical	Supplier Name	City	State	Spec #
NADONE	CONE SOLVENTS	MEMPHIS	TN	910037
Test	Method	Type	Low	High
WATER	COA		0.0100	0.5000
Description 0.5% max				
Chemical	Supplier Name	City	State	Spec #
NAOH 20	CHEMTECH.	MEMPHIS	TN	910077
Test	Method	Type	Low	High
NAOH	COA		19.0000	21.0000
Description 19 - 21% Naoh				
Chemical	Supplier Name	City	State	Spec #
NAOH 50	VULCAN	BIRMINGHAM	AL	910074
Test	Method	Type	Low	High
NAOH	% COA		48.0000	51.0000
Description 48 - 51% Naoh				
Chemical	Supplier Name	City	State	Spec #
NAOH 50	LA ROCHE INDUSTRIES	GRAMERCY	LA	910024
Test	Method	Type	Low	High
NAOH	% COA		48.0000	51.0000
Description 48 - 51% Naoh				
Chemical	Supplier Name	City	State	Spec #
NAOH 50	IDEAL	MEMPHIS	TN	910072
Test	Method	Type	Low	High
NAOH	% COA		48.0000	51.0000
Description 48 - 51% Naoh				
Chemical	Supplier Name	City	State	Spec #
NAOH 50	CONE\CO FORMOSA PLASTICS	POINT COMFORT	TX	910073

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Test	Method	Type	Low	High	Description
NAOH	% COA		48.0000	51.0000	48 - 51% Naoh

Chemical	Supplier Name	City	State	Spec #
NAOH 50	CHEMTECH.	MEMPHIS	TN	910107

Test	Method	Type	Low	High	Description
NAOH	% COA		48.0000	51.0000	48 - 51% Naoh

Chemical	Supplier Name	City	State	Spec #
NAOH 50	RAY PIONEER	SOMEWHERE ELSE		910023

Test	Method	Type	Low	High	Description
GRADE			1.0000	3.0000	1 = is not rayon grade....2 = is rayon grade
NAOH	% COA		48.0000	51.0000	48 - 51% Naoh,

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Chemical	Supplier Name		City		State	Spec #
NAOH-CYMP	CONE SOLVENTS		MEMPHIS		TN	910152
Test	Method	Type	Low	High	Description	
NAOH %	COA		0.0100	100.0000	.	

Chemical	Supplier Name		City		State	Spec #
NAOH-DOVER	VARIOUS					910158
Test	Method	Type	Low	High	Description	
H2O PPM	COA		0.0100	200.0000	.	
NAOH%	COA		99.9000	100.0000	.	

Chemical	Supplier Name		City		State	Spec #
NAOH-MEM-ACI	VULCAN		BIRMINGHAM		AL	910088
Test	Method	Type	Low	High	Description	
IRON PPM	COA		0.0100	5.0000	5 ppm Max Iron	
NAOH %	COA		49.0000	51.0000	49 - 51 % Naoh	

Chemical	Supplier Name		City		State	Spec #
NAOH-SOLID	CHEMTECH		ST LOUIS,		MO	910075
Test	Method	Type	Low	High	Description	
NAOH	COA		95.0000	100.0000	95% Naoh Min	

Chemical	Supplier Name		City		State	Spec #
NAOH50	VERTEX		Memphis		Tn	910175
Test	Method	Type	Low	High	Description	
NAOH %	COA		48.0000	51.0000	.	

Chemical	Supplier Name		City		State	Spec #
NICKEL	VARIOUS					910110
Test	Method	Type	Low	High	Description	
RAINEY?	OR RQ?		1.0000	3.0000	SPONGE, RAINEY NICKEL	1 = NO, 2 = YES

Chemical	Supplier Name		City		State	Spec #
NICKEL CAT.	ACTIVATED METALS		SEVIERVILLE		Tn	910117
Test	Method	Type	Low	High	Description	
NICKEL	COA		2.0000	2.0000	1 for no,, 2 for yes	

Chemical	Supplier Name		City		State	Spec #
NIT.ACID\FMC	EL DORADO CHEMICAL		ST. LOUIS		MO	910138
Test	Method	Type	Low	High	Description	
% H2O	COA		0.0001	0.0001	.	
% HNO3	COA		60.0000	85.0000	.	
% OLEUM	COA		0.5000	2.5000	.	

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Chemical	Supplier Name		City		State	Spec #
NITRIC ACID	ELDORADO CHEMICAL		EL DORADO		AR	910007
Test	Method	Type	Low	High	Description	
NITRIC % COA			98.0000	100.0000	98% Min	

Chemical	Supplier Name		City		State	Spec #
NITRIC ACID	ELDORADO CHEMICAL		EL DORADO		AR	910156
Test	Method	Type	Low	High	Description	
IRON,PPM COA			0.0100	50.0000	Iron, ppm	
NITRIC % COA			98.0000	100.0000	.	

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Chemical	Supplier Name	City	State	Spec #
NITROGEN	AIR PRODUCTS	DECATUR	AL	910008
Test	Method	Type	Low	High
OXYG PPM	COA		0.0100	3.0000 3 ppm Oxygen max
WATERPPM	COA		0.0100	3.0000 3 PPM Water max

Chemical	Supplier Name	City	State	Spec #
NITROGEN	PRAXAIR	MCINTOSH	AL	910186
Test	Method	Type	Low	High
H2O, PPM	COA		0.0100	5.0000 .
O2, PPM	COA		0.0100	8.0000 .

Chemical	Supplier Name	City	State	Spec #
NITROMETHANE	AUSTIN CHEMICAL			910128
Test	Method	Type	Low	High
% NM	COA		99.5000	100.0000 % Nitromethane

Chemical	Supplier Name	City	State	Spec #
NITROMETHANE	ACETO AGRICULTURAL CHEMS	LAKE SUCCESS	NY	910192
Test	Method	Type	Low	High
NITMET %	COA		99.5000	100.0000 .

Chemical	Supplier Name	City	State	Spec #
NITROMETHANE	WEGO	GREAT NECK	NY	910032
Test	Method	Type	Low	High
NM %	COA		99.5000	100.0000 99.5% min

Chemical	Supplier Name	City	State	Spec #
NORCAT	VARIOUS			910119
Test	Method	Type	Low	High
BFG OK'D	none		1.5000	3.0000 1 = no / 2 = yes bfg approved

Chemical	Supplier Name	City	State	Spec #
ODCB	SOLUTIA	SAUGET	IL	910130
Test	Method	Type	Low	High
ODCB %	COA		98.5000	100.0000 ODCB %
PDCB %	COA		0.0100	1.0000 PDCB %

Chemical	Supplier Name	City	State	Spec #
ODCB	STANDARD CHLORINE	DELAWARE CITY,	DE	910009
Test	Method	Type	Low	High
ODCB %	COA		98.5000	100.0000 98.5% odcB min, .1% pdcb max
PDCB %	COA		0.0100	1.0000 .

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Chemical	Supplier Name		City		State	Spec #
ODCB	METACHEM\STANDARD		DELAWARE CITY		DE	910164
Test	Method	Type	Low	High	Description	
ODCB %	COA		98.5000	100.0000	.	
PDCB, %	COA		0.0100	1.0000	.	

Chemical	Supplier Name		City		State	Spec #
ODCB	PPG INDUSTRIES		NATRIUM		WV	910046
Test	Method	Type	Low	High	Description	
ODCB %	COA		98.4999	100.0000	98.5 % min ODCB, 1% max pdcb	
PDCB %	COA		0.0100	1.0000	98.5%min ODCB/ 1.0%PDCB max	

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Chemical	Supplier Name	City	State	Spec #
ODCB	MONSANTO	SAUGET	IL	910010
Test	Method	Type	Low	High
ODCB	% COA		98.5000	100.0000
PDCB	% COA		0.0100	1.0000
				Description
				98.5% min odcB, 1% max pdcb

Chemical	Supplier Name	City	State	Spec #
OLEUM \FMC	FMC	GREEN RIVER	WY	910139
Test	Method	Type	Low	High
% SULF.	COA		104.0000	105.5000
				Description
				.

Chemical	Supplier Name	City	State	Spec #
PALLIDIUM	VARIOUS			910171
Test	Method	Type	Low	High
% PALLID	%		5.0000	100.0000
CARBON	Number		1940.0000	10000.0000
				Description
				5% min. Pallidium on Carbon
				Carbon number 1940 SWR

Chemical	Supplier Name	City	State	Spec #
PAM	KURRARAY	TOKYO	JP	910029
Test	Method	Type	Low	High
PAM %	COA		97.0000	100.0000
				Description
				97% min

Chemical	Supplier Name	City	State	Spec #
PBA	NIPA HARDWICKE	ELGIN	SC	910025
Test	Method	Type	Low	High
PBA %	COA		98.5000	100.0000
				Description
				98.5% min

Chemical	Supplier Name	City	State	Spec #
PBALD	AMERIBROM	BEER SHEVA, ISRAEL		910051
Test	Method	Type	Low	High
PBALD	% COA		97.0000	100.0000
				Description
				97% min

Chemical	Supplier Name	City	State	Spec #
PCL3	A AND W AMERICAS	CHARLESTON	SC	910049
Test	Method	Type	Low	High
PCL3	% COA		99.0000	100.0000
				Description
				99% min

Chemical	Supplier Name	City	State	Spec #
PCL3	VARIOUS			910095
Test	Method	Type	Low	High
%PCL3	from COA		99.5000	100.0000
				Description
				% PCL3 for Eth 99.5% min

Chemical	Supplier Name	City	State	Spec #
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PE-DOVER PERSTORP 910160

Test	Method	Type	Low	High	Description
ASSAY, %	COA		99.0000	100.0000	.
H2O, PPM	COA		0.0100	200.0000	.

Chemical Supplier Name City State Spec #

PENNSPRAY 70 PENNZOIL CO. Shreveport la 910148

Test	Method	Type	Low	High	Description
NAME	NAME		1.0000	3.0000	1 = NAME DOES NOT MATCH 2 = NAME MATCHES COA

Chemical Supplier Name City State Spec #

PENNZPAR 71 ATLAS PROCESSING CO

Test	Method	Type	Low	High	Description
CHK GRDE	COA		1.0000	3.0000	1 = bad, 2 = good, ok

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Chemical	Supplier Name	City	State	Spec #
PERKLONE D	ICI CHEMICALS & POLYMERS	WILMINGTON	DE	910155
Test	Method	Type	Low	High
H2O, PPM	COA		0.0100	200.0000
Description				
Chemical	Supplier Name	City	State	Spec #
PHENOL-DOVER	ARISTECH			910157
Test	Method	Type	Low	High
ASSAY%	COA		99.0000	100.0000
H2O, PPM	COA		0.0100	200.0000
Description				
Chemical	Supplier Name	City	State	Spec #
PLATINUM CAT	JOHNSON MATTHEY	WEST DEPTFORD	NJ	910042
Test	Method	Type	Low	High
PERFORM	TEST		1.0000	3.0000
1=fail, 2=pass				
Chemical	Supplier Name	City	State	Spec #
PROP ANHYD.	EASTMAN CHEMICAL CO.	KINGSPORT	TN	910022
Test	Method	Type	Low	High
ANHYD %	COA		98.0000	100.0000
98%min				
Chemical	Supplier Name	City	State	Spec #
PROP. ACID	HOECHST-CELANESE	PAMPA, TX	TX	910041
Test	Method	Type	Low	High
PROP %	COA		98.0000	100.0000
98%min				
Chemical	Supplier Name	City	State	Spec #
PROP. ACID	UNION CARBIDE	CHARLESTON	WV	910020
Test	Method	Type	Low	High
PROP %	COA		98.0000	100.0000
98%min				
Chemical	Supplier Name	City	State	Spec #
PROP. ACID	EASTMAN CHEMICAL	LONGVIEW	TX	910013
Test	Method	Type	Low	High
PROP %	COA		98.0000	100.0000
98%min				
Chemical	Supplier Name	City	State	Spec #
PTPM-TETRA	VARIOUS			910181
Test	Method	Type	Low	High
PTPM %	COA		35.0000	72.0000
Description				
Chemical	Supplier Name	City	State	Spec #
R118118	ZENECA	UNITED KINGDOM		910014

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Test	Method	Type	Low	High	Description
R118118%	COA		33.0000	38.0000	R118118% is 33% min-38% max
TOL, %	COA	N	0.0000	0.0000	.

Chemical	Supplier	Name	City	State	Spec #
RUBBER	VARIOUS				910101

Test	Method	Type	Low	High	Description
ASH	COA		0.0001	0.2000	ALKYL LITHIUM POLYMERIZED POLYBUTADIENE = RUBBER
COLOR	COA		0.0001	10.0000	APHA ON COA COLOR
DIS.TIME	COA		0.0001	4.0000	DISSOLVING TIME = 4 HOURS MAX
MOONEY V	COA		47.0000	57.0000	ON COA MOONEY VISCOSITY
SOL. VIS	COA		147.0000	177.0000	SOLUTION VISCOSITY OF 5.43% IN TOLUENE
STABILZR	COA		0.5200	1.0800	STABILIZER
TOL.INS	COA		0.0001	0.0100	TOLUENE INSOLUBLES ON COA
TURBIDIT	COA		0.0001	0.0001	TURBIDITY, SPEC. = CLEAR
VIS.GEL	COA		0.0001	0.0001	VISUAL GELS = NIL IS SPEC.
VOL.MAT			0.0001	0.6000	VOLATILE MATTER

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Raw Materials Acceptance Specs

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Chemical	Supplier Name	City	State	Spec #
SALT	MORTON - SALT (CONE SOLV)	MEMPHIS	TN	910091
Test Method Type	Low High	Description		
SALT % COA	99.5000 100.0000	Salt % 99.5% min		
SALT	CARGILL	MEMPHIS	TN	910027
Test Method Type	Low High	Description		
SALT % COA	99.0000 100.0000	Salt % = 99% min		
SICL4	VARIOUS			910121
Test Method Type	Low High	Description		
PURITY COA/%wt	99.5000 100.0000	the purity is expressed in %weight, 99.5%minimum. Silvestra		
SOD.CARB\FMC	IDEAL	MEMPHIS	TN	910140
Test Method Type	Low High	Description		
% ASSAY COA	99.2000 100.0000	.		
% H2O COA	0.0100 0.2500	.		
% NAO2 COA	58.0000 100.0000	.		
GRADE100 COA	0.0100 2.0000	.		
GRADE160 COA	0.0100 2.0000	.		
SODA ASH	IDEAL	MEMPHIS	TN	910053
Test Method Type	Low High	Description		
MESH 100 COA	1.0000 3.0000	80-100 mesh 1 = no, 2 = yes		
SODA ASH	VARIOUS			910122
SODA ASH	FMC CORP APG	BALTIMORE	MD	910132
Test Method Type	Low High	Description		
% ACTIVE COA	17.0000 20.0000	.		
STEPPAC 8170	STEPAN	WINDER	GA	910035
Test Method Type	Low High	Description		
PERFORM PROP-7	1.0000 3.0000	1 = fail, 2 = pass		
STEROLS	ARCHER DANIEL MIDLAND	DECATUR	GA	910172

AB0000025772

Test	Method	Type	Low	High	Description
STEROLS	% COA		90.0000	100.0000	TOTAL FREE STEROLS

Chemical	Supplier Name	City	State	Spec #
STEROLS	HENKLE CHEMICALS			910173

Test	Method	Type	Low	High	Description
STEROLS	% COA		90.0000	100.0000	.

Chemical	Supplier Name	City	State	Spec #
SULF ACD ACI	ELDORADO CHEMICAL	EL DORADO	AR	910079

Test	Method	Type	Low	High	Description
IRON PPM	COA		0.0100	40.0000	Iron ppm is 40 max, Sulf % is 93% min, Water % 7 max
SULF	% COA		98.0000	100.0000	Sulfuric Acid %

Chemicals Division
Pampa Plant

Celanese Ltd.
Highway 60 West
PO Box 937
Pampa, TX 79065
806 665 1801

Celanese
CHEMICALS

PRODUCT QUALITY REPORT

CEDAR CHEMICAL COMPANY
Hwy 242 South
West Helena, AR 72390

Attn: Lisa Walker

Your Order No: 02-022101

Our Order No: 309135

Container No: Groendyke
3418.

Compartment No:

Destination: W. Helena, AR

Date Shipped: 022802

ACETIC ANHYDRIDE

SPECIFICATIONS -----	LIMITS -----	RESULTS (1) -----
Acetic Anhydride, wt. %	min 99.50	99.82
Acetic Acid, wt. %	max 0.50	.14
Color, Pt-Co units	max 10	3.
Permanganate Time, minutes	min 10	11.
Aluminum, ppm	max 1	<1.0
Iron, ppm	max 1	<1.0
Heavy Metals as Lead, ppm	max 1	<1.0
Nonvolatile Matter, g/100ml	max 0.003	<0.003
Chlorides, ppm	max 1	<1
Total Sulfur, ppm	max 1	<1

Released by: V. Anderson

If you have any questions regarding this shipment, please contact
the customer service representative for your district.

(1) Unless otherwise indicated as shipment specific (*), the
results in this report are representative of the shipping inventory.

Celanese

Celanese Chemicals
A business of Celanese Inc.

AB0000025799

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Raw Materials Acceptance Specs

Page # 15

Chemical	Supplier Name	City	State	Spec #
SULF ACD DCA	ELDORADO CHEMICAL	EL DORADO	AR	910080
Test Method Type	Low	High	Description	
SULF % COA	98.0000	100.0000	Sulf % is 98% min	

Chemical	Supplier Name	City	State	Spec #
SULF ACD DIR	ELDORADO CHEMICAL	EL DORADO	AR	910081
Test Method Type	Low	High	Description	
SULF % COA	93.0000	100.0000	Sulf % is 93% min	

Chemical	Supplier Name	City	State	Spec #
SULF ACD TA	ELDORADO CHEMICAL	EL DORADO	AR	910082
Test Method Type	Low	High	Description	
SULF % COA	93.0000	100.0000	sulf % = 93% min	

Chemical	Supplier Name	City	State	Spec #
SULF.ACD\FMC	CHEMTECH.	MEMPHIS	TN	910141
Test Method Type	Low	High	Description	
% ASSAY COA	93.0000	100.0000	.	

Chemical	Supplier Name	City	State	Spec #
SULFURIC EO	VARIOUS			910096
Test Method Type	Low	High	Description	
%ACTIVE FROM COA	97.0000	100.0000	SULFURIC FOR SCRUBBER, % Active is 97% min	

Chemical	Supplier Name	City	State	Spec #
T-500 SOLVNT	MOBIL CHEMICAL	CHALMETTE	LA	910054
Test Method Type	Low	High	Description	
CHK GRDE COA	1.0000	3.0000	1 = fail, 2 = pass	

Chemical	Supplier Name	City	State	Spec #
TAP-ANTIBLZE	A AND W AMERICAS	CHARLESTON	SC	910185
Test Method Type	Low	High	Description	
COA GRADE N	0.0000	0.0000	coa for antiblaze	

Chemical	Supplier Name	City	State	Spec #
TENNECO AV-1	CONE SOLVENTS	MEMPHIS	TN	910109
Test Method Type	Low	High	Description	
AV-1 GRD	1.0000	3.0000	1 = is not the right grade, 2 = is the right grade	

Chemical	Supplier Name	City	State	Spec #
TEPA	VARIOUS			910124
Test Method Type	Low	High	Description	

AB0000025799

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Raw Materials Acceptance Specs

Page # 16

Chemical	Supplier Name	City	State	Spec #	
TOLUENE/FMC	FMC	GREEN RIVER	WY	910142	
Test	Method	Type	Low	High	Description
SULFEN%	COA	N	0.0000	0.0000	.

Chemical	Supplier Name	City	State	Spec #	
TOXIMUL 804	STEPAN	WINDER	GA	910016	
Test	Method	Type	Low	High	Description
PERFORM	PROP-7	PROP-7	1.0000	3.0000	1 = fail, 2= pass

Chemical	Supplier Name	City	State	Spec #	
TPP-DOVER	DOVER CHEMICAL	DOVER	OH	910159	
Test	Method	Type	Low	High	Description
ASSAY %	COA		97.0000	100.0000	Assay %
COLOR	COA		0.0100	50.0000	.

Chemical	Supplier Name	City	State	Spec #	
TPP-TETRA	VARIOUS			910180	
Test	Method	Type	Low	High	Description
TPP %	COA		28.0000	65.0000	.

Chemical	Supplier Name	City	State	Spec #	
XYLENE	CONE SOLVENTS	MEMPHIS	TN	910193	
Test	Method	Type	Low	High	Description
XYLENE %	coa	G	99.5000	0.0000	.

Chemical	Supplier Name	City	State	Spec #	
XYLENE-CYCLA	CONE SOLVENTS	MEMPHIS	TN	910195	
Test	Method	Type	Low	High	Description
XYLENE %	COA	G	99.5000	0.0000	.

Chemical	Supplier Name	City	State	Spec #	
XYLENE-DOVER	CONE SOLVENTS	MEMPHIS	TN	910161	
Test	Method	Type	Low	High	Description
ASSAY %	COA		95.0000	100.0000	.
H2O, PPM	COA		0.0100	200.0000	.

AB0000025799

%TEPA coa 90.0000 100.0000 tepa for dca storage

Chemical	Supplier Name	City	State	Spec #	
THIONYL CHLD	BAYER CHEMICALS	BAYTOWN	TX	910017	
Test	Method	Type	Low	High	Description
THIOCHL%	COA		99.0000	100.0000	99% min

Chemical	Supplier Name	City	State	Spec #	
TOLUENE	EXXON	HOUSTON	TX	910019	
Test	Method	Type	Low	High	Description
TOLUEN %	COA		97.0000	100.0000	% Tol 97% min, % water .05 max
WATER %	COA		0.0100	0.0500	0.05%max



49 Phillips Road 311

Helena, Arkansas 72342

Phone: 870-572-3701 Fax: 870-572-3795

Website - www.cedarchem.com

PURCHASE REQUISITION

Revision D

PURCHASE ORDER NUMBER

01-020278

Terms: Net 30 ☐ Net 45 ☐ Net 60 ☒ Net 90 ☐
Other: _____

PURPOSE _____

ACCOUNT NO. _____

DATE 2-28-01

Item	Quantity	Unit	Description and Code	Price/Unit
	376.10	#	LIQUID ODCB	.31
			Ship From: Sangt IL	
			rec'd 3/12	
			1 TLX220829 1. 3/12 3/12	
			2. 3/23 -	
			1. TLX220829 rec'd 3/12	
			2.	
			(1 3/12 3/12 3/12 3/12)	

Vendor Information: No. _____

Name Solution

P.O. Box _____

Street _____

City _____

State _____ Zip _____

Supplier pays Freight ☒

Cedar pays Freight ☐

Ship via _____

Scheduled Delivery date _____

Freight / Tax \$ _____

TOTAL REQUISITION AMOUNT

\$ _____

Submitted by _____

☐ Fax the Purchase Order to:

Approved by X

Fax No: _____

FOR INTERNAL USE ONLY

CEDAR WORK ORDER NO.

WAREHOUSE / UNIT DESIGNATION

CEDAR REQUISITION NO.

NO 1897

AB0000012636

Revision D



~~01-11-11~~

Terms: Net 30 ☐ Net 45 ☐ Net 60 ☒ Net 90 ☐
Other:

PURPOSE _____ ACCOUNT NO. _____ DATE 02-28-01

Fax No. _____

-FOR INTERNAL USE ONLY

CEDAR REQUISITION NO.

NO 1899

AB0000012636

Revision D



01-620341

Terms: Net 30 ☐ Net 45 ☐ Net 60 ☒ Net 90 ☐
Other: _____

PURPOSE _____ ACCOUNT NO. _____ DATE 3-7-01

[illegible]

Vendor Information: No.
Name Mr. Jackson
P.O. Box _____
Street _____
City _____
State _____ Zip _____

Supplier pays Freight ☒ Cedar pays Freight ☐ Ship via

Scheduled Delivery date _____ **Freight / Tax \$** _____

TOTAL REQUISITION AMOUNT

Submitted by _____

☐ **Fax the Purchase Order to:**

Fax No. _____

Approved by

-FOR INTERNAL USE ONLY-

CEDAR WORK ORDER NO.

WAREHOUSE / UNIT DESIGNATION**CEDAR REQUISITION NO.**

No 1902

AB0000012636



W. G. Krummrich Plant

Sauget, IL 62208-1199

Phone (618) 482-6464

FAX (618) 482-6809

Certificate of Analysis

CEDAR CHEMICAL CORPORATION
ATTN: QUALITY CONTROL MANAGER
WEST HELENA PLANT
HIGHWAY 242 SOUTH
W. HELENA, AR 72390

FAX TO: 870-872-3795

Product: ORTHO DICHLOROBENZENE
Shipment No: 900329040
Delivery No: 380447470
Order No: 300254315
Lot Number: KB2014

Customer P.O. No: 01-020278
Customer Code:
Date Manufactured: 3/2/01
Date Shipped: 3/2/01
Shipped Via: ITLX 220829

CHARACTERISTICS	DETERMINED	SPECIFICATIONS
Appearance	PASSES	
Color, Apha	10	15 Maximum
Water, %	0.001	0.010 Maximum
PDCB, %	0.57	0.90 Maximum
Assay, %	99.33	99.00 to 100.00
TCB, %	0.01	

Comments:

Monika G. Lorenz
Q. C. Business Team Leader



PPG INDUSTRIES, INC.
NATRIUM WV

**CERTIFICATE OF ANALYSIS
AND
NOTICE OF SHIPMENT**

SHIP TO CEDAR CHEMICAL CORPORATION
ATTN: LISA WALKER
49 PHILLIPS ROAD 311
HIGHWAY 242 SOUTH
WEST HELENA AR 72390
FAX: 870-572-3795

DATE ISSUED 03/09/2001 02:04 P.M.
BY

MARK J. SINCLAIR
CUSTOMER QUALITY ASSURANCE DEPT
(304-455-6701)

DATE SHIPPED	PPG ORDER NO.	CUSTOMER ORDER NO.	CUSTOMER PRODUCT CODE
03/09/2001	669682-3	01-020278	
TRUCK	FREIGHT	TOTAL WEIGHTS (Bulk Only, Billing Shown if Applicable)	
ROUTE		GROSS	NET
70199	PPD	74900	42860

QLYC001 QUALITY CARRIERS, INC.

This is to certify that the products shipped below by PPG Industries, Inc. meet or exceed all analysis standards.

PRODUCT DESCRIPTION: ORTHO DCB-GRADE F

PROPERTY	UNIT OF MEASURE	RESULT	CUSTOMER SPECIFICATIONS	
			MINIMUM	MAXIMUM
P-DCB	%WT	0.73		1.0
O-DCB	%WT	99.19	98.5	

Mark Sinclair

AB0000012636



PPG INDUSTRIES, INC.
NATRIUM WV

**CERTIFICATE OF ANALYSIS
AND
NOTICE OF SHIPMENT**

SHIP TO CEDAR CHEMICAL CORPORATION
ATTN: LISA WALKER
49 PHILLIPS ROAD 311
HIGHWAY 242 SOUTH
WEST HELENA AR 72390
FAX: 870-572-3795

DATE ISSUED 03/09/2001 04:20 P.M.
BY

MARK J. SINCLAIR
CUSTOMER QUALITY ASSURANCE DEPT
(304-455-6701)

DATE SHIPPED	PPG ORDER NO.	CUSTOMER ORDER NO.			CUSTOMER PRODUCT CODE
03/09/2001	669686-2	01-020278			
TRUCK	FREIGHT	TOTAL WEIGHTS (Bulk Only, Billing Shown if Applicable)			
		GROSS	TARE	NET	BILLING
70147	PPD	75100	32040	44060	

ROUTE

QLYC001 QUALITY CARRIERS, INC.

This is to certify that the products shipped below by PPG Industries, Inc. meet or exceed all analysis standards.

PRODUCT DESCRIPTION: ORTHO DCB-GRADE F

PROPERTY	UNIT OF MEASURE	RESULT	CUSTOMER SPECIFICATIONS	
			MINIMUM	MAXIMUM
P-DCB	%WT	0.71		1.0
O-DCB	%WT	99.18	98.5	

Mark Sinclair

AB0000012636



PPG INDUSTRIES, INC.
NATRIUM WV

**CERTIFICATE OF ANALYSIS
AND
NOTICE OF SHIPMENT**

SHIP TO CEDAR CHEMICAL CORPORATION
ATTN: LISA WALKER
49 PHILLIPS ROAD 311
HIGHWAY 242 SOUTH
WEST HELENA AR 72390
FAX: 870-572-3795

DATE ISSUED 03/12/2001 08:14 A.M.
BY

MARK J. SINCLAIR
CUSTOMER QUALITY ASSURANCE DEPT
(304-455-6701)

DATE SHIPPED	PPG ORDER NO.	CUSTOMER ORDER NO.	CUSTOMER PRODUCT CODE
03/09/2001	667158-0	01-020337	
RAIL CAR	FREIGHT	TOTAL WEIGHTS (Bulk Only, Billing Shown if Applicable)	
SHPX220757	PPD	GROSS 253100	TARE 68400 NET 184700 BILLING

ROUTE

CSXT001 CSXT-(ESTL)-UP

This is to certify that the products shipped below by PPG Industries, Inc. meet or exceed all analysis standards.

PRODUCT DESCRIPTION: ORTHO DCB-GRADE F

PROPERTY	UNIT OF MEASURE	RESULT	CUSTOMER SPECIFICATIONS	
			MINIMUM	MAXIMUM
P-DCB	%WT	0.9		1.0
O-DCB	%WT	99.03	98.5	

Mark Sinclair

AB0000012636



PPG INDUSTRIES, INC.
NATRIUM WV

**CERTIFICATE OF ANALYSIS
AND
NOTICE OF SHIPMENT**

SHIP TO CEDAR CHEMICAL CORPORATION
ATTN: LISA WALKER
49 PHILLIPS ROAD 311
HIGHWAY 242 SOUTH
WEST HELENA AR 72390
FAX: 870-572-3795

DATE ISSUED 03/12/2001 08:14 A.M.
BY

MARK J. SINCLAIR
CUSTOMER QUALITY ASSURANCE DEPT
(304-455-6701)

DATE SHIPPED	PPG ORDER NO.	CUSTOMER ORDER NO.	CUSTOMER PRODUCT CODE
03/09/2001	667158-0	01-020337	
RAIL CAR	FREIGHT	TOTAL WEIGHTS (Bulk Only, Billing Shown if Applicable)	
SHPX220757	PPD	GROSS 253100	NET 184700
ROUTE		YARE 68400	BILLING

CSXT081 CSXT-(ESTL)-UP

This is to certify that the products shipped below by PPG Industries, Inc. meet or exceed all analysis standards.

PRODUCT DESCRIPTION: ORTHO DCB-GRADE F

PROPERTY	UNIT OF MEASURE	RESULT	CUSTOMER SPECIFICATIONS	
			MINIMUM	MAXIMUM
P-DCB	%WT	0.9		1.0
O-DCB	%WT	99.03	98.5	

Mark Sinclair

AB0000012636



PPG INDUSTRIES, INC.
NATRIUM WV

**CERTIFICATE OF ANALYSIS
AND
NOTICE OF SHIPMENT**

SHIP TO CEDAR CHEMICAL CORPORATION
ATTN: LISA WALKER
49 PHILLIPS ROAD 311
HIGHWAY 242 SOUTH
WEST HELENA AR 72390
FAX: 870-572-3795

DATE ISSUED 03/12/2001 08:14 A.M.
BY

MARK J. SINCLAIR
CUSTOMER QUALITY ASSURANCE DEPT
(304-455-6701)

DATE SHIPPED	PPG ORDER NO.	CUSTOMER ORDER NO.	CUSTOMER PRODUCT CODE
03/09/2001	667158-0	01-020337	
RAIL CAR	FREIGHT	TOTAL WEIGHTS (Bulk Only, Billing Shown if Applicable)	
SHPX220757	PPD	GROSS 253100	TARE 68400 NET 184700 BILLING

ROUTE

CSXT081 CSXT-(ESTL)-UP

This is to certify that the products shipped below by PPG Industries, Inc. meet or exceed all analysis standards.

PRODUCT DESCRIPTION: ORTHO DCB-GRADE F

PROPERTY	UNIT OF MEASURE	RESULT	CUSTOMER SPECIFICATIONS MINIMUM	CUSTOMER SPECIFICATIONS MAXIMUM
P-DCB	WT	0.9 ✓		1.0
O-DCB	WT	99.03 ✓	98.5	

QK

Mark Sinclair

AB0000012636

**FOR HELP IN
CHEMICAL
EMERGENCIES
INVOLVING SPILL,
LEAK, FIRE OR
EXPOSURE ---
CALL CHEMTREC
TOLL FREE
(800) 424-9300
DAY OR NIGHT**

CONSIGNEE
' TO
DESTINATION

ORIGINAL - NOT NEGOTIABLE

RECEIVED, subject to the classifications and markings in effect on the date of the issue of this Bill of Lading

[illegible]

FROM
AT.

METACHEM PRODUCTS, LLC
NEW CASTLE, DE

B/L # 00004257

Page 1 of 1

DATE 2-15-01

CUSTOMER #

CEDAR CHEMICAL CORP
HWY # 242 SOUTH
SOUTH HELENA, AR

Subject to Section 7 of conditions of applicable bill of lading, if the shipment is to be delivered to the consignee without recourse on the consignor, the consignee shall sign the following statement:

The carrier shall not accept delivery of this shipment without payment of freight and all other lawful charges.

Structure of Constant

251340

66,500

184,840

1998

NE/STELMO/MP	PREPAID	01-01-0087/4	DELAWARE CITY, DE	604x38/80
--------------	---------	--------------	-------------------	-----------

NUMBER OF SHIPPING UNITS	HAZ	PROPER SHIPPING NAME	WEIGHT	LABELS REQUIRED
1 TC	BQ	O-DICHLOROBENZENE 6.1 UN 1591 PG III MARINE POLLUTANT ERG # 152	185,000 LB	

CERTIFICATE OF COMPLIANCE

I certify that the shipment covered by this bill of lading was loaded by me or at my direction; that I inspected the load after it was placed and secured upon the motor vehicle; that said motor vehicle conforms with the Motor Carrier Safety Regulations and Specifications issued by the Department of Transportation and that the load was secured therein in accordance with such regulations and specifications.

Driver acknowledges possession of emergency response information.

QAD

DO NOT EXHAUSTIVE ANY OF CASH

THIS IS TO CERTIFY THAT THE ABOVE NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED AND LABELED, AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION.

SHIPPER **METACHEM PRODUCTS, LLC**
PERMANENT **745 GOVERNOR LEA ROAD**
ADDRESS **NEW CASTLE, DE 19720**
OF SHIPPER

I CERTIFY THAT YOUR TANK TRUCK IS CONNECTED TO THE PROPER PIPING AND STORAGE TANKS WHICH IS ASSIGNED TO RECEIVE THE NET WEIGHT OF THE COMMODITY NAMED ON THIS BILL OF LADING.

RECEIVED BY:

PLACATED

KEEP AWAY FROM FOOD

THE DESCRIPTION AND WEIGHT INDICATED ON THIS ORDER ARE CORRECT SUBJECT TO VERIFICATION BY MDT CORP. PER AGREEMENT.

"Shipper's imprint in lieu of stamp, not part of bill of lading approved by the Interstate Commerce Commission."
 "If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight." NOTE—Where the rate is dependent on value, shipper's are required to state specifically in writing the agreed or declared value of the property.
 The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding.

The Fiber Boxes used for this shipment conform to the specifications set forth in the box maker's certificate thereon, and all other requirements of Consolidated Freight Classification.

02/16/01 10:03 AM 1 002 034 2001

MEALACRAN PRODUCTIONS

1000

LWalker

From: "David Parker" <dparker@cvrtmail.com>
To: "L Walker" <lwalker@cvrtmail.com>
Cc: "joel walker" <JWALKER@CVRTMAIL.COM>; "Jim Rone" <jrone@cvrtmail.com>; "greg satterfield" <gregs@cvrtmail.com>
Sent: Wednesday, May 22, 2002 10:46 AM
Subject: sodium methoxide
Lisa,

Here's the count on the sodium methoxide we have packed out. Let me know if you have any questions.

SODIUM METHOXIDE PKG'ED FROM T-5213 ON 3-13-01

Drum No. Net Wt. (lbs.)

1	444
2	425
3	432
4	420
5	428
6	417
7	424
8	418
9	422
10	413
11	427
12	445
13	270

Total 5383 net lbs.

SODIUM METHOXIDE PKG'ED FROM T-5213 ON 5-21-02

Drum no. Net Wt. (lbs.)

1-22	407
23	84

Total 9038 net (lbs.)

TOTAL LBS. OF SODIUM METHOXIDE IN DRUMS - 14,421 LBS.

5/22/2002

AB0000012636

RAW MATERIAL RECEIVING RECORD № 20352

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

15:30

RECEIVED BY

D Parker

SECTION 1

DATE	ORDER NO	CAR OR TRUCK NO	DECLARED WEIGHT
3/23/02	659672	6167	Net

SHIPPER	CARRIER
Aventis / Russell Stanley	Transcarriers

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
480	B/T	unit 5	N/A	mt drums

COMMENTS

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
D Parker	

UNLOADED AT (tank number, unit, warehouse, etc.)

Dropped trailer at unit 5

COMMENTS

Use as needed for pack-out of Cyclanides

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS

STRAIGHT BILL OF LADING - SHORT FORM - ORIGINAL - NOT NEGOTIABLE

RECEIVED, subject to the classifications and liability filed tariffs in effect on the date of the issue of the Bill of Lading.

FROM:

**Russell-Stanley**

An Industrial Container Supply Chain Management Company

PAGE

TRC 6167

1 TRK 9036

AT: 356 W. 19th St., Reserve, LA 70084
(504) 536-4200

BILL OF LADING #

233500

TICKET DATE	SHIPPED VIA	TRAILER #	DRIVER	DELIVERY TIME	SHIP TO
03/25/02	TRANS CAR	11711			THIRD PARTY

SHIP TO:	102228 0000 AVENTIS CROP SCIENCE/CEDAR 49 PHILLIPS ROAD # 311 HELENA AR 72342 CEDAR CHEMICAL CORPORATION	US
----------	--	----

R.S. ORDER #	CUSTOMER AC. #	C.O.D. \$	AND REMIT TO:
233500	659672		356 W. 19th St. Reserve, LA 70084

QUANTITY SHIPPED	PART NUMBER	DESCRIPTION	AMOUNT
480	03004ECUDX	POLYDRUM 30G DELEX OPEN EURO BLU SHIP EXACT QUANTITY OF 480 DRUMS. SHIP VIA TRANS CARRIERS. BILL THIRD PARTY FREIGHT TO: AVENTIS CROPS SCIENCE USA LP PO BOX 13985, RESEARCH TRIANGLE PARK, NC 27709 Cedar Chem 3/23/02 SEAL#	.000
480			.000

If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is carrier's or shipper's weight.
NOTE: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Carrier is responsible to notify Russell-Stanley immediately of any alteration of this document to 504-536-4200 to the Traffic Mgr.

CERTIFICATE OF CONFORMANCE

This certifies that all Non-removable head (UN 1H1, UN 1A1 and 3H1) and Removable head (UN 1H2 and 1A2) drums, manufactured by RUSSELL-STANLEY CORP. in accordance with the standards set forth in Part 178 Subpart L - Non-bulk Performance Oriented Packaging Standards - of Title 49 Code of Federal Regulations-Transportation (current edition) and subsequent revisions appearing in the Federal Register during current calendar year have been successfully qualification tested for their respective design types in accordance with the requirements for packaging given in Part 178 Subpart M - Testing of Non-bulk Packagings and Packages - Title 49 CFR and when prepared for shipment using the closures supplied and / or specified and closed as instructed by RUSSELL-STANLEY CORP are capable of meeting the performance standards indicated by the drum markings applied in accordance with 49 CFR § 178.503. Furthermore, the marking on the drum is certification of this capability as stated in § 178.2 (b), 49 CFR.

Signed Russell-Stanley Bill of Lading Required For Process of Payment For Carrier.

☐ Plastic Container OTE 156.600 sub#

☐ New Steel Drums 55 Gallon Empty. Gauge

Customer Arrival Time _____ Departure Time 3:22:22

Customer Signature: _____ Date: _____

Russell-Stanley SHIPPER PER *D. Kemp* Agent, Per _____

Permanent Address of Shipper: 356 W. 19th St., Reserve, LA 70084

Subject to Section 7 of conditions applicable bill of lading. If this shipment is to be delivered to the consignee with recourse on the Consignor, the Consignor shall sign the following statement:

The carrier shall not make delivery this shipment without payment of freight and all other lawful charges.

[Signature]
(Signature of Consignor)

If charges are to be prepaid, write stamp here, "To be Prepaid."

Received \$ _____ to

apply in prepayment of the charges on property described hereon

Agent or Cashier

Per
(The signature here acknowledges only the amount prepaid.)

Charges
Advanced \$
Shipper's imprint in lieu of stamp; not a part of bill of lading approved by the Interstate Commerce Commission

The Fibre Boxes used for this shipment conform to the specifications set forth in box maker's certificate thereon, and all on requirements of Rule 41 of the Consolidated Freight Classification.

AB0000012636

Revision D

**Helena, Arkansas 72342**

Phone: 870-572-3701 Fax: 870-572-3795

Website - www.cedarchem.com

02-011876

Terms: Net 30 ☐ Net 45 ☐ Net 60 ☒ Net 90 ☐
Other:

PURPOSE

ACCOUNT NO.

S 836 1440 DATE 1-15-02

Vendor information: No.
 Name Plumtag
 P.O. Box _____
 Street _____
 City _____
 State _____ Zip _____

Supplier pays Freight ☒

Cedar pays Freight ☐ **Ship via**

Ship via

Name Elmifag

P.O. Box _____

Street _____

City _____

State _____ Zip _____

Scheduled Delivery date**Freight / Tax \$****TOTAL REQUISITION AMOUNT**

Submitted by:

☐ **Fax the Purchase Order to:**

Fax No.

Approved by

-FOR INTERNAL USE ONLY

CEDAR WORK ORDER NO.**WAREHOUSE / UNIT DESIGNATION**

CEDAR REQUISITION NO.

149 7-40



POLYETHYLENE

30 GALLON OPEN HEAD SHIPPING CONTAINER

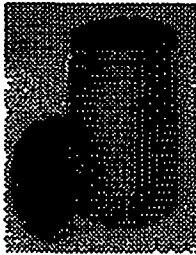
This Mauser-design container can be used with a wide range of products, from food to solid hazardous materials.

Features:

- Heavy duty HDPE construction.
- Galvanized steel or plastic closing ring available.
- Easy to handle with a drum dolly or forklift truck.
- Available in blue to meet FDA product requirements.
- Large-top opening assures easy access to the stored lading.
- High UN rating at 1H2/200/S, covering most uses for plastic open tops.
- Nestable version for column stacking when full.

■ [Click for detailed specs](#)



**QUALITY:**

All Russell-Stanley products are manufactured under a total quality management system that minimizes variation and waste. To ensure process integrity, our blow-molding method includes a statistical control process that continuously monitors up to eleven parameters. In addition, the quality system used at our manufacturing plants is certified to ISO 9002 standards. We have also earned the MIPi quality symbol, a new international standard for plastic drums.

**POLYETHYLENE****30 GALLON OPEN HEAD SHIPPING CONTAINER****STANDARD****DOT:** UN 1H2/Y200/S**MATERIAL:** High Molecular Weight, High Density Polyethylene**STANDARD DRUM COLOR:** Blue**FDA:** Blue drums only. Requires EPT gaskets.**CONSTRUCTION:** Blow molded.**CAPACITY:** Rated 114 liters (30 gallons)**DIMENSIONS:** Diameter: 489 mm (19.3 in.); Height: 791 mm (31.1 in.)**NOMINAL TARE WEIGHT:** 6.8 kg (15.0 lbs.)**OCEAN CUBE (TWEED'S ACCURATE):** 6.476 ft.³**LID:** Injection molded, low density polyethylene World Star™ lid with natural rubber gasket. Gasket is FDA compliant.**CLOSURES:** Fully removable polyethylene lid with galvanized steel clamp closing ring. All plastic closing ring is also available.**EMBOSSING:** Custom embossing available. Minimum quantities required.**HANDLING:** Handle with drum dolly or on pallets.**FOR MORE INFORMATION CALL:** (908) 203-9500**INTERNET ADDRESS:** www.russell-stanley.com

The information in this document provides a general description of a Russell-Stanley product. It is not a comprehensive specifications guide. It is the customer's sole responsibility to ensure that the Russell-Stanley packaging selected is capable of safely containing the product to be packaged. Containers should not be pressurized or used as long-term storage containers.

RAW MATERIAL RECEIVING RECORD

No 20044

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

1020

RECEIVED BY

DLW

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

2/16/02

Qwentia

4245

Net 39800

SHIPPER

Qwentia

CARRIER

Enterprise

QUANTITY

CONTAINER

DESTINATION

RAW MAT CODE #

DESCRIPTION

1

T/T

Unit 5

NA

Sodium
Methylate

COMMENTS

Driver had C of A

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

C. Leslie

1100

UNLOADED AT (tank number, unit, warehouse, etc.)

T-5213

Unit 5

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

CT

✓

COMMENTS

Sodium Methylate: 25.5

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

J. Turner

✓

PLANT WEIGHT

UNLOADING TIMES

NET 39.860

START TIME

END TIME

COMMENTS

WEIGHED ON A FAIRBANKS SCALE

DATE 2-10-02

CUSTOMERS NAME Cedar Chemical

ADDRESS Halawa, HI

COMMODITY _____

CARRIER _____

REMARKS

71600 10:21AM FE 16 02

31740 03:15PM FE 16 02

79.860

LBS. GROSS _____

LBS. TARE - DRIVER ON _____ OFF _____

LBS. NET @ _____ PER LB. PRICE _____

SHIPPER _____

WEIGHER _____

FAIRBANKS SCALES CO. 03:14 PM 16 02

RAW MATERIAL RECEIVING RECORD

No 19969

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

RECEIVED BY

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

2/5/02 Qwentia 1815 Net 34,708

SHIPPER

CARRIER

Qwentia Blackhawk

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
78	Drums	Warehouse	N/A	CPDM

COMMENTS

no Conf OK to enter by David Parker

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

Benn Ford 10:58

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

PLANT WEIGHT

UNLOADING TIMES

NET START TIME END TIME

COMMENTS

RAW MATERIAL RECEIVING RECORD

No 19975

CEDAR CHEMICAL 90001-1 REV: C

TIME IN AT GATE

14:50

RECEIVED BY

mc

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
7-6-02	APVENS	EXFU 380011-5	Net 544180 lbs

SHIPPER

AVANTIS

CARRIER

Gulf States

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
59540 kg	T/T	Unit #5	N/A	Sodium methylate

COMMENTS

C of A IN lab

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
D. Lawson	15:45

UNLOADED AT (tank number, unit, warehouse, etc.)

T-5213 Unit-5

COMMENTS

Material is 150°F cooling to 120°F before unloading

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
TLP	X		

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
[Signature]			

PLANT WEIGHT

UNLOADING TIMES

NET 44.120

START TIME

0200

END TIME

0730

COMMENTS

Manway Gasket was bad

WEIGHED ON A FAIRBANKS SCALE

DATE

7/6/02

CUSTOMER'S NAME

Cedar Chem

ADDRESS

40 Phillips Rd #311 Helena AR 72342

COMMODITY

Sodium methoxide Solution

CARRIER

Gulf States

REMARKS

LBS. GROSS

LBS. TARE - DRIVER ON

OFF

✓

LBS. NET @

PER LB. PRICE

SHIPPER

WEIGHER

Ind. Hightower

78340

02:51PM FE 06 02

34220

07:50AM FE 07 02

FAIRBANKS SCALE CO. 088808

44.120

Shipper
TABY SCHIFFFAHRTS- UND
SPEDITIONS GMBH
HAMBURG
AS AGENT OF DEGUSSA AG

Consignee (if "to Order" so indicate)
CREANOVA INC.
379 INTERPACE PARKWAY
BUILDING C
07054 PARSIPPANY, NJ
FAX: 001-973-541-8070

Notify Party (No claim shall attach for failure to notify)
BDP INTERNATIONAL
ATTN. LAURA O'CONNOR

147-31 176TH STREET
USA- JAMAICA, NY 11434

Place of Receipt
LUELSDORF

Place of Delivery
HELENA, AR

Combined Transport **BILL OF LADING**
No.: **42-2365**

«»» TABY
Schiffahrts- und Speditionen GmbH

Tankcontainer Services

D-20095 Hamburg
Meßberg 4 - Danske Hus
Tel.: (040) 35 09 08-30
Fax: (040) 35 09 08-37

E-Mail: tabyhamburg@taby.de

Port of Loading
ROTTERDAM

Port of Discharge
HOUSTON

HAMBURG, 10.12.01

Vessel
SEALAND FLORIDA

Voyage

Option
DOOR/DOOR

Number of Original B/L
0/NONE

Container Serial no. (and Seal no.)	Number of Packages or Shipping Units	PARTICULARS OF CARGO AS DECLARED BY SHIPPER Description of goods	Net Cargo Payload	Tare Weight	Gross Weight
ICTU 240190-3	3	NM 30/SODIUM-METHYLATE-SOLU	19740	3980	23720
BVIU 424045-2		TION 30 8/TANK CONTAINER	19760	3980	23740
EXFU 380011-5		IMDG 3.3 UN 1289 FLPT+32DCE MFAG 306/705 EMS3-04 PKGIII ORDER: 40510368, 40510045, 40503208 0030441927+25, 0030420093, 6284890, 6284870 PO 546888/40+6202220 RES: 410325000865 EXPRESS RELEASE	20040	3900	23940

DECLARATION OF HAZARDOUS/ DANGEROUS MATERIALS

IMO class: 3.3

UN-No. 1289

This is to certify that the a/m material is properly described, classified and labeled according to regulations of US-Dept. of Transportation and the provisions of the IMO International Maritime Dangerous Goods Code as follows: **SODIUM METHYLATE, SOLUTION**

Flashpoint: + 32 DCEL

DOT 48 CFR Part. 172 Sub - C Class/label:

Subsidiary risk:

Page:

Certified on behalf of shipper by: DEGUSSA AG, MARL

date: 10.12.01

For Delivery of Goods apply to Messrs.
TABY AMERICA, INC.
1150 HARTMAN ROAD SUITE 104
CRANFORD, NJ 07016 / USA
TEL. 1-908-931 1700

SPECIAL REMARKS: (cargo or temperature control/special handling/
cleaning etc):
CHEMTREC EMERGENCY CHEMICAL RESPONSE
TEL. NUMBER: 800-424-9300

Freight & Charges	Chargeable Units	Rate	Prepaid	Collect
FREIGHT PREPAID			*AS AGREED*	

Received in apparent good order and condition except as otherwise noted the total number of containers or other packages or units enumerated below for transportation from the place of receipt to the place of delivery subject to the terms hereof. One of the above mentioned Bills of Lading must be presented in exchange for the

hardy had been made between them. In witness whereof Bills of Lading of the tenor and date having been signed one of which being accomplished the others to stand void.
ACTUALLY SHIPPED ON BOARD



SHIPPING ORDER

must be legibly filled in, in ink, in indelible Penell, or in Carbon, and retained by the Agent

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSOURCE USA
C/O CEDAR CHEMICAL CORPORATION
49 PHILLIPS RD #311
HELENA AR 72342
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Blackhawk Warehouse
407 Phillips 311 Road
Helena AR 72342
USA

B/L NO.

80126056

Page: 1 of 1

Date: February 05, 2002

CARRIER: ALT CARRIER

VEHICLE NO: BMLA 181S

FREIGHT CHARGES: Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send

AVENTIS CROPSOURCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO.: HM	DESCRIPTION	CLASS	ID	P.G.	NAERG	WEIGHT
78 Pieces	130277	CHEMICALS, N.O.I. CDM DRMP 1X200KG To deliver Feb 5th. <i>Lot # 01-96V = 70 01-9011 = 8 78</i> <i>Beavis Fogg</i>					34,788 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport

TOTAL SHIPPING UNITS

78

PLACARDS REQUIRED:

none

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED?

☐ YES

☐ NO-FURNISHED BY CARRIER

NAERG SUPPLIED?

☐ YES

☐ NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE

TOTAL WEIGHT

34,788 LB

C AMOUNT

D FEE

D TOTAL

Aventis
P.O. Box 12014
62 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

Date:

2-5-02

Date:

Shipper:

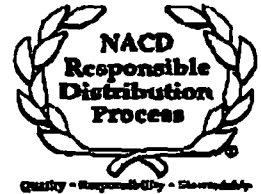
Audrey

Carrier:

Monty Mooney

Consignee:

AB0000012636

**ACCRON, INC.****ORDER CONFIRMATION****DATE:** 1-28-02**CUSTOMER:** CEDAR CHEMICAL
ATTN: LISA**P.O. #:** PLEASE ADVISE 02-011960**PRODUCT:** FORMIC ACID 85%**QUANTITY:** TRUCK LOAD OF DRUMS (545 #'S NET EACH DRUM)**DELIVERY DATE:** THURS., 1-31-02 BEFORE 5 PM 2 PM**DELIVERY ADDRESS:** PLEASE ADVISE49 Phillips 311 Road
Helena AR 72342**COST:** \$0.48/# DELV.

Brandy.

Please do not ship until a 2/6 delivery


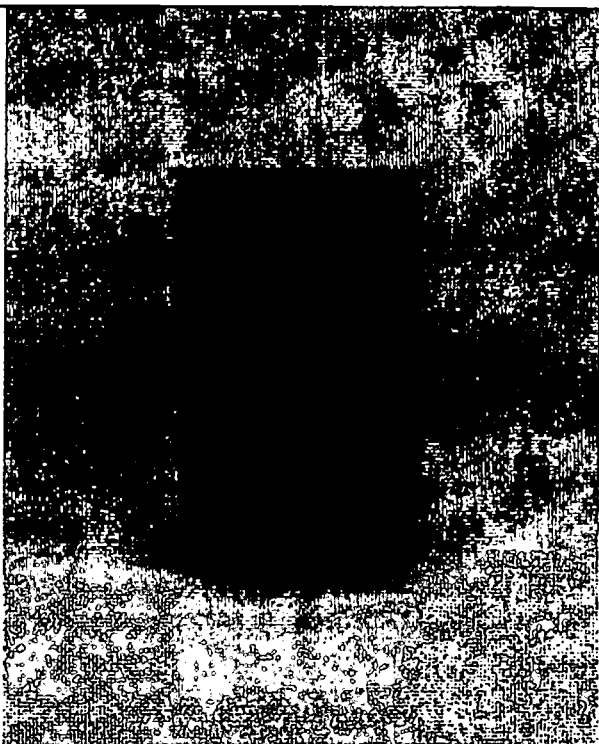
THANK YOU FOR THE ORDER!!!Lisa- Please call me
with the above info.

Thanks -

Brandi 281-367-5898

GREIF BROS. CORPORATION
INDUSTRIAL SHIPPING CONTAINER GROUP

LaPorte Product Comparison *Cyclanilide drum*

Convert From:	Convert To:
POH30	OS-30
	
<u>Technical Data</u>	<u>Technical Data</u>
Drum Height: 31.5"	Drum Height: 29.4"
Drum Diameter: 18.4"	Drum Diameter: 19.3"
Opening I.D. 15.5"	Opening I.D. 17.5"
Total Weight: 12.9 lbs	Total Weight: 14.6 lbs
Overflow Capacity: 31.2 gallons	Overflow Capacity: 32.2 gallons
Midpanel Height: 16.6"	Midpanel Height: 11.4"
Export Cubes: 6.69	Export Cubes: 6.94
Regulatory Information: X150	Regulatory Information: Y180 X125
	<u>Advantages</u> <ul style="list-style-type: none"> • Higher overflow capacity. • Lower center of gravity for easier handling. • Industry standard dimensions for replacement of components. • Produced in this specification at two different locations.

ICTU240190-3

degussa.

Fine Chemicals

Degussa AG - Werk Lilsdorf - D-53859 Niederkassel

Zentrale Analytik Lilsdorf
D-53859 Niederkassel
Telephone: 02208 / 69-242
FAX: 02208 / 69-452
2001-12-10

FAX-No.: 023854934

Creanova Inc.

220 Davidson Avenue
08873 Somerset N.J USA

Your order No 6284870

Purchase order No. 30441925
Delivery No. 0040510048000010
Lot-No. 1121072
Quantity . . . 20000 KG

Post-It® Fax Note 7871		Date 1/17/02	# of pages 3
To LISA	From LEE E.		
Co./Dept. CEDAR CHEM.	Co. DEGUSSA		
Phone 7870-672-3795	Phone #		
Fax # CGE A FOR	Fax #		
PO. 6284870-6284870-6202220			

01017210-1013254-1/1

Certificate of Analysis

Product: SODIUM METHYLATE SOLUTION 30%

property	method	specification values	unit	value
Total alkalinity as NaOCH ₃	SOP 0827 [titrimetry]	29,5 - 31,0	mass-%	30,4
Total content of NaOH and Na ₂ CO ₃	SOP 0868 [Karl Fischer titration]	<= 0,5	mass-%	< 0,1
Effective content sodium methylate	SOP 0827/868 [titrimetry]	29,5 - 30,5	mass-%	30,3

With these results of our inspections we certify that the material described above complies with the terms of the contract order

Degussa AG

Fine Chemicals

signed Dr. Partner
Quality Inspection Manager

This certificate has been prepared with care and to the best of our knowledge as part of the quality assurance system of Degussa AG. It is provided to our customers for information purposes only and does not relieve from obligation to perform proper incoming inspections upon receipt of the product. Furthermore, it is solely the customer's responsibility to determine the suitability of the product for its intended use. Degussa AG warrants that the product described herein fully meets its sales specification.

® a registered trademark of the Degussa AG

Certificate of Analysis machine-made; valid without signature

Page 1
End

From-DEGUSSA

12:12:11 AM
AB0000012636

BVIU424045-2

degussa.

Fine Chemicals

Degussa AG - Werk Lütendorf - D-53658 Niederkassel

Zentrale Analytik Lütendorf
 D-53658 Niederkassel
 Telephone : 02208 / 69-242
 FAX : 02208 / 69-402
 2001-12-10

FAX-No. : 02386494934

Creanova Inc.

220 Davidson Avenue
 08873 Somerset N.J USA

Your order No. 6284890

Purchase order No. 30441927
 Delivery No. 0040510388000010
 Lot-No. 1121073
 Quantity 20000 KG

01017224-1013253-1/1

Certificate of Analysis

Product: SODIUM METHYLATE SOLUTION 30%

property	method	specification values	unit	value
Total alkalinity as NaOCH ₃	SOP 0827 [Ultrimetry]	29,5 - 31,0	mass- %	30,4
Total content of NaOH and Na ₂ CO ₃	SOP 0888 [Karl Fischer titration]	<= 0,5	mass- %	< 0,1
Effective content sodium methylate	SOP 0827/888 [Ultrimetry]	29,5 - 30,5	mass- %	30,3

With these results of our inspections we certify that the material described above complies with the terms of the contract order.

Degussa AG
 Fine Chemicals

signed Dr. Portner
 Quality Inspection Manager

This certificate has been prepared with care and to the best of our knowledge as part of the quality assurance system of Degussa AG. It is provided to our customers for information purposes only and does not relieve from obligation to perform proper incoming inspections upon receipt of the product. Furthermore, it is solely the customer's responsibility to determine the suitability of the product for its intended use. Degussa AG warrants that the product described herein fully meets its sales specification.

© a registered trademark of the Degussa AG

Certificate of Analysis machine-made; valid without signature.

Page 1
 End

Degussa Order # 6202220
Customer PO # 646888/40
Resource # 4103250
EXFU 380011-5

T-828 P.01/01 F-612

degussa.

Fine Chemicals

Degussa AG - Werk Lisdorf - D-53859 Niederkassel

Zentrale Analytik Lisdorf
D-53859 Niederkassel
Telephone : 02208 / 68-242
FAX : 02208 / 68-402
2001-12-11

FAX-No. : 02386494934

Greeneva Inc.

220 Davidson Avenue
08873 Somerset N.J USA

Your order No. : 6202220

Purchase order No. : 80420083
Delivery No. : 0040503208000010
Lot-No. : 11211T1
Quantity : 20000 KG

01016465-1013234-1 / 1

Certificate of Analysis

Product: **SODIUM METHYLATE SOLUTION 30%**

property	method	specification values	unit	value
Total alkalinity as NaOCH ₃	SOP 0827 [titrimetry]	29,5 - 31,0	mass- %	30,3
Total content of NaOH and Na ₂ CO ₃	SOP 0868 [Karl Fischer titration]	<= 0,5	mass- %	0,1
Effective content sodium methylate	SOP 0827/868 [titrimetry]	29,5 - 30,5	mass- %	30,2

With these results of our inspections we certify that the material described above complies with the terms of the contract order.

Degussa AG
Fine Chemicals

signed Dr. Portner
Quality Inspection Manager

This certificate has been prepared with care and to the best of our knowledge as part of the quality assurance system of Degussa AG. It is provided to our customers for information purposes only and does not relieve from obligation to perform proper incoming inspections upon receipt of the product. Furthermore, it is solely the customer's responsibility to determine the suitability of the product for its intended use. Degussa AG warrants that the product described herein fully meets its sales specification.

® is a registered trademark of the Degussa AG

Certificate of Analysis machine-made; valid without signature.

Page 1
End

RAW MATERIAL RECEIVING RECORD

№ 19883

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

1200

RECEIVED BY

Ok

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

1/16/02

Qwentis

ESTU240/90-3

Net 19 700 KGS

SHIPPER

Qwentis

CARRIER

Rogers

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit 5	NA	sodium methoxide

COMMENTS

no C of A OK to enter per David Parkey

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

Blake Johnston

NA

UNLOADED AT (tank number, unit, warehouse, etc.)

T-5213

COMMENTS

No C of A OK'd to unload By D. Parkey

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

--	--	--	--

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

ASims	X		
-------	---	--	--

PLANT WEIGHT

UNLOADING TIMES

NET 43820

START TIME

END TIME

COMMENTS

TABY America Delivery Confirmation

This confirmation must be filled out completely and faxed back to TABY within 48hrs of delivery. The signature of a plant rep. confirming arrival/departure times and heel confirmation must be obtained. Failure to do so may result in delay/refusal of extra charges. If you have any questions regarding this delivery please contact TABY immediately.

TANK # : ICTU 240190-3	TABY REF # : 42.2365
PLANT : CEDAR CHEMICAL	PRODUCT: SODIUM METHYLATE SOLUTION
DELIVERY DATE : 1/16/02	APPOINTMENT TIME : 8:00 AM
Arrival Time :	Departure Time :
Reason for delay :	Tank contains heel :
	____ Yes ____ No
	Aprx. heel amount _____ gal.
Truck Detention (if applicable) :	Hrs
Name of Driver (please print) :	Signature of driver :
Name of plant rep. (please print)	Signature of plant rep :

WEIGHED ON A FAIRBANKS SCALE

DATE 1-16-02

CUSTOMERS NAME Cedar Chemical

ADDRESS _____

COMMODITY Sodium methoxide

CARRIER Quintis

REMARKS _____

77600 12:01PM JA 16 02

LBS. GROSS

LBS. TARE - DRIVER ON _____ OFF _____

LBS. NET @ _____ PER LB. PRICE _____

33780 04:10PM JA 16 02

SHIPPER _____

43820
FAIRBANKS SCALE CAT. 083905

WEIGHER _____

FAIRBANKS SCALES INC. 1-800-821-3322

PICKSLIP

January 16, 2002

Page 1 of 1

Delivery: 80124781
Del. Created By: Craig Dodson
Route: 000032

Requested Date: January 18, 2002
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USC1
AVENTIS CROPSCIENCE USA LP
C/O COASTLAND WAREHOUSE COMPAN
125 COLEMAN BLVD PORT AUTHORIT
SAVANNAH GA 31408
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE DRMP 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 714274

Order Taken By: Craig Dodson

Picked by: _____

Total Shipping units: _____

Gross Weight 16900 LB

AB0000012636

RAW MATERIAL RECEIVING RECORD

No 19827

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0910

RECEIVED BY

OW

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
1/4/02	adventis	EXFU380265-3	Net 43870

SHIPPER

adventis

CARRIER

Chickadee

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	8/c	unit 5	NA	sodium methylate

COMMENTS

Driver had C of A

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
M. Thomas	0945

UNLOADED AT (tank number, unit, warehouse, etc.)

T-5213 UNIT 5

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
PF	✓		

COMMENTS

COA. 29.9% ~~Accept~~ per G.S., nothing to tip coa to lab

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT

NET 43,980

UNLOADING TIMES

START TIME

0910

END TIME

15:55

COMMENTS

degussa.

WEIGHT TICKET

CARRIER

CKSW

TLR./CAR NO.

ENFU 380265

PRODUCT

Sodium Methylate

PLANT

Creanova

B/L NO.

0363305901

F/C NO.

RELEASE NO.

GROSS

79,380

TARE

35,510

NET

43,870

1/3/02

← START HERE

DB

WEIGHED BY

CALL IN DATE:

ACTUAL ARRIVAL DATE:

WEIGHED ON A FAIRBANKS SCALE

DATE _____

CUSTOMERS NAME _____

ADDRESS _____

COMMODITY Sodium methoxide

CARRIER _____

REMARKS _____

LBS. GROSS _____

LBS. TARE - DRIVER ON _____ OFF _____

LBS. NET @ _____ PER LB. PRICE _____

SHIPPER _____

WEIGHER _____

79360 09:10AM JA 04 02

35380 03:55PM JA 04 02

43,980

FAIRBANKS SCALE CAT. 083905

degussa.

BILL OF LADING

Shipper's B/L No.

0363305901

Straight Bill of Lading-Short Form-ORIGINAL-NOT NEGOTIABLE
Reserved Subject to the classification and tariffs in effect on the date of the issue of this Bill of Lading

ORDER NO. 6330590	REL	CONTRACT NO.	CUSTOMER P O NO. VERBAL-LISA WALKER	ORIGINAL	
CEDAR CHEMICAL CORPORATION 49 PHILLIPS ROAD #311 HELENA, AR 72342			C.O.D. SHIPMENT COD Amt _____ Collection Fee _____ Total Charges _____		CHECK BOX INDICATING HOW CHARGES ARE TO BE PAID <input checked="" type="checkbox"/> PREPAID <input type="checkbox"/> COLLECT
<small>The property described below is apparent good order except as noted (contents and condition of contents of packages unknown) marked consigned and destined to indicated carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agree to carry to its usual place of delivery at said destination if on its route otherwise to deliver to another carrier on the route to said destination and it is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination and as to each party of any time interested in all or any of said property that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Freight Bill of Lading set forth (1) in Uniform Freight Classification in effect on the date hereof if this is a rail or a rail water shipment or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading (including those on the back thereof) set forth in the classification or tariff which governs the transportation of this shipment and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns</small>			<small>NOTE: Where the rate is dependent on value the agreed or declared value of the property is hereby specifically stated to be not exceeding _____ 220 cents or _____ per pound for each distribution package. The paper bags used in this shipment conform to the specifications for paper bags rate 40 section 10 (c) of the uniform freight classification. The fibre boxes and/or drums used for this shipment conform to the specifications set forth in the box makers certificate thereon and all other requirements of the Uniform Freight Classification.</small>		CARRIER NOTE IF DELAYED IN TRANSIT SHIPPER MUST BE ADVISED IMMEDIATELY
Shipped From: 03 THEODORE AL - MOBILE PLAN		SCAC CHIK	CARRIER NAME CHICKASAW CONT SER		DATE SHIPPED 1/03/02
			TRUCK/CAR NO EXFU380265		IN EMERGENCIES CALL CHEMTREC 800-424-9300
No and Kind of Pkg.	PKT	Description of Articles Special Marks and Exceptions		GROSS WEIGHT (Sub to Ctr)	Class of Rate
1 BULK TRUCK	X	SODIUM METHYLATE SOLUTIONS, 3, (8), UN 1289, III, ERG-132 **** DELIVER JAN. 04, 2002 @ 09:00 AM ***** *** (PER LISA WALKER) C OF A WITH SHIPMENT *** USE TANK # EXFU 380265 LOT # 1100072 43870 LBS. NO DETENTION TIME DO NOT BREAK DOWN PALLETS C OF A TENDERED TO DRIVER: ERG & PLACARDS OFFERED: NUMBER OF PALLETS: PALLETS WEIGHT: 43870		79380	99
				Subject to section 7 of conditions of applicable bill of lading if this shipment is to be delivered to the consignee without recourse on the consignee the pro- prietor shall sign the follow- ing statement. The Carrier shall not make delivery of this shipment without payment of freight and all other lawful charges. DEGUSSA CORP. (Signature of consignee) Receipt is to apply in payment of the charges on the property described herein. Agent or Cashier For (The signature here Acknowledges only the Amount prepaid) Charges Advanced If "If the shipment moves between two parts by a carrier by water (the law requires that the bill of lading shall state whether it is "gross" or "net" weight) This tank car is blanketed with no inert gas <input type="checkbox"/> YES <input type="checkbox"/> NO "We hereby certify tank was loaded to full shell gallonage capacity" This shipment is correctly described Current Weight is 79380 LB Subject to Verification by the Weighing and Inspection Bureau According to Agreement "Shipper's imprint or lien of stamp not a part of bill of lading approved by the Interstate Commerce Commission"	
Shipper Permanent Address: DEGUSSA CORP. P.O. BOX 677 PARSIPPANY, NJ 07054-0677		*This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the department of transportation.		ATTENTION CARRIER ** PREPAID ONLY** for payment attach bill of lading to freight bill and send to: DEGUSSA CORP. c/o FTS PAYMENT PLAN P.O. BOX 1259, SOMERVILLE, NEW JERSEY 08876-1259 Payment inquiry (908) 526-3824	
Per JOHN M. RHODES Shipping Supervisor		Carrier: CHICKASAW CONT SERV		Date: _____	

AB0000012636

RAW MATERIAL RECEIVING RECORD

No 19828

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE 10:50	SECTION 1	RECEIVED BY DL
--------------------------	-----------	-------------------

DATE 1/4/02	ORDER NO. N/A	CAR OR TRUCK NO. 1815	Net 34788
----------------	------------------	--------------------------	--------------

SHIPPER Qxenti	CARRIER Blackhawk
-------------------	----------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
78	drum	warehouse	NT	CDM

COMMENTS
no C of A required

SECTION 2

RECIPIENT Berni Fazio	TIME SAMPLE/CERTIFICATE TAKEN TO LAB 10:55
--------------------------	---

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT NET	UNLOADING TIMES START TIME	END TIME
---------------------	-------------------------------	----------

COMMENTS



SHIPPING ORDER

must be legibly typed in, in ink, in indelible print, or
in Carbon, and retained by the Agent

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA
C/O CEDAR CHEMICAL CORPORATION
49 PHILLIPS RD #311
HELENA AR 72342
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Blackhawk Warehouse
407 Phillips 311 Road
Helena AR 72342
USA

B/L NO.

80123721

Page: 1 of 1

Date: January 04, 2002

CARRIER: ROUTING GUIDE *Black*

VEHICLE NO.: 1815

FREIGHT CHARGES: Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS. _____

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send to

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO.	HM	DESCRIPTION	CLASS	ID	P.G.	NAERG	WEIGHT
15600 Kilograms	130277		CHEMICALS, N.O.I. CDM DRMP 1X200KG TO deliver Jan 4th. 78 drums - (1 drum - N 1-859.8 kg drum, drum - Shipped per Aventis) Xct# 01/97V = 78 dr. <i>Boon Ford</i> COA To be provided by Aventis					34,788 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

78

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED?

☐ YES ☐ NO-FURNISHED BY CARRIER
☐ YES ☐ NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE _____

TOTAL
WEIGHT

34,788 LB

Aventis
P.O. Box 12014
#2 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709C AMOUNT
O FEE
D TOTAL

Date: _____

Date: _____

Shipper: *W. M. M. M. M.*Carrier: *North M. M. M.*

Consignee: _____

3. CARRIER

AB0000012636

No.

THIS NUMBER MUST APPEAR ON
ALL INVOICES, PACKING SLIPS
PACKAGES & CORRESPONDENCE

Acknowledge and Invoice to:

CEDAR CHEMICAL CORPORATION
49 PHILLIPS RD. 311
HELENA, AR 72342

DATE

L. WALKER

REQUISITIONER

BRENNTAG MID-SOUTH, INC.
SECTION 970
LOUISVILLE, KY.CEDAR CHEMICAL CORPORATION
49 PHILLIPS RD 311
HELENA, AR 72342

40289

V
E
N
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RS
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P
T
OTHIS OFFER TO PURCHASE IS MADE ONLY ON THE EXPRESS CONDITION THAT SELLER ACCEPTS ALL THE TERMS AND CONDITIONS ON
THE REVERSE SIDE HEREOF AND ANY SUPPLEMENTAL CONDITIONS ATTACHED HERETO.

SHIP FROM		FOB S.P.		FREIGHT TERMS		PPDCOL 02215		VENDOR NO. 04	
SHIP VIA BEST WAY		Required Delivery Date 8/08/00		PAYMENT TERMS NET 60 DAYS		TAX PERMIT NO. 8533			
ITEM	QUANTITY	UNIT	INVENTORY NO.	DESCRIPTION	G. L. ACCOUNT NO.	UNIT PRICE			
	REQ. NO. 6980 BY		L. WALKER		S 836 1460				
1	21,800	LBS	4	4-6240 FORMIC ACID SHIP FROM MEMPHIS, TN		.50			
*** CONFIRMATION ***									
<p><i>Deliver 1-10 -</i></p> <p><i>Deliver 1/17</i></p> <p><i>40 drums</i></p>									

VENDOR COPY

BY

RUSSELL D FAIRCHILD

AUTHORIZED SIGNATURE

PURCHASING MANAGER

AB0000012636

RAW MATERIAL RECEIVING RECORD

No 20002

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

07:20

RECEIVED BY

THJ

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

2-1402

AVENTIS

98480

Net 36960

SHIPPER

AVENTIS

CARRIER

JACOBSON TRANS

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
64 Drums	B/T	Warehouse	N/A	24-DCA

COMMENTS

N/A

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

Benn: Ford

7:30

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

PF

✓

COMMENTS

Anten approval.

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

PLANT WEIGHT

UNLOADING TIMES

START TIME

END TIME

NET

COMMENTS

AB0000012636



SHIPPING ORDER

must be legibly filled in, in ink, in indelible pencil, or in Carbon, and retained by the Agent

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

CONSIGNOR (SHIPPER):

B/L NO.

AVENTIS CROPSCIENCE USA
C/O CEDAR CHEMICAL CORPORATION
49 PHILLIPS RD #311
HELENA AR 72342
USA

Aventis CropScience USA LLP
c/o Wright Distribution Center
1000 Hanthorn Road
Lima OH 45804
USA

80126054
Page: 1 of 1
Date: February 08, 2002
VEHICLE NO.: JACOBSON TRANS
FREIGHT CHARGES: 98480
Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send to

24 HOUR EMERGENCY TELEPHONE NUMBER:

SEAL NOS.

4247

1-800-424-9300

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO., HM	DESCRIPTION	CLASS	ID	P.G.	NAERG	WEIGHT
64 Drums	109671	X DICHLOROANILINE, SOLID MARINE POLLUTANT CHEMICALS, N.O.I. 2,4-DCA (2,4-DICHLOROANILINE) 1X250KG To deliver February 11th.	6.1 ORM	UN1590	11	153	36,960 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

TOTAL SHIPPING UNITS

64

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED?

☒ YES ☐ NO-FURNISHED BY CARRIER

MARKS SUPPLIED?

☐ YES ☒ NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE

Date:

TOTAL
WEIGHT

36,960 LB

C AMOUNT

O FEE

D TOTAL

Aventis
P.O. Box 12014
62 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

Shipper:

3 - CARRIER

Carrier:

Date:

Consignee:

AB0000012636

Revision D



01-121779

Terms: Net 30 ☒ Net 45 ☐ Net 60 ☐ Net 90 ☐
Other:

PURPOSE _____ ACCOUNT NO. 58361470 DATE 12.21.01

[illegible]

Supplier pays Freight ☐ Cedar pays Freight ☒ Ship via

State Zip

TOTAL REQUISITION AMOUNT \$Submitted by HW

Approved by V.H. Stone

Fax No. _____

-FOR INTERNAL USE ONLY

CEDAR WORK ORDER NO.**WAREHOUSE / UNIT DESIGNATION****CEDAR REQUISITION NO.**

62 6977

AB0000012636

Revision D



Terms: Net 30 ☒ Net 45 ☐ Net 60 ☐ Net 90 ☐
Other: _____

PURPOSE _____ ACCOUNT NO. 58261470 DATE 11-9-01

Vendor Information: No. Supplier pays Freight ☐ Cedar pays Freight ☒ Ship via

Name

P.O. Box Scheduled Delivery date Freight / Tax \$

Street

City TOTAL REQUISITION AMOUNT \$

State Zip

Submitted by

☐ Fax the Purchase Order to:

Fax No.

Approved by

FOR INTERNAL USE ONLY

CEDAR REQUISITION NO.

Nº 2674

AB0000012636

Revision D



02-011960

Terms: Net 30 ☐ Net 45 ☐ Net 60 ☒ Net 90 ☐
Other: _____

PURPOSE _____ ACCOUNT NO. _____ DATE 1-28-02

[illegible]

112 7 50

Revision D



49 Phillips Road 311

Helena, Arkansas 72342

Phone: 870-572-3701 Fax: 870-572-3785

Website - www.cedarchem.com

PURCHASE ORDER NUMBER

01-111687

Terms: Net 30 ☐ Net 45 ☐ Net 60 ☒ Net 90 ☐
Other: _____

PURPOSE _____ ACCOUNT NO. _____ DATE 11/30/

Item	Quantity	Unit	Description and Code	Price/Unit
	15.160	#	41566 Vexlink	.25
			Ship from Memphis TN	
			1. @ 12/2 10mm	
			2. 12/11 10mm	
			3. 1/8 2pm - (2pm)	

Vendor Information; No.

Supplier pays Freight ☒ Cedar pays Freight ☐ Ship via

Name Carl J. Harts

P.O. Box _____

Street _____

City _____

State _____ Zip _____

Scheduled Delivery date _____ **Freight / Tax \$** _____

TOTAL REQUISITION AMOUNT   **\$**

Submitted by me

Fax the Purchase Order to:

Approved by W. H. Hone

Fax No. _____

-FOR INTERNAL USE ONLY-

CEDAR WORK ORDER NO.**WAREHOUSE / UNIT DESIGNATION****CEDAR REQUISITION NO.**

Nº 2678

AB0000012636

RAW MATERIAL RECEIVING RECORD

No 19762

CEDAR CHEMICAL FORM-1 REV: C

TIME IN AT GATE

07:50

RECEIVED BY

M.O.

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

12-18-01 646888 PCVV 255022-7 Net 43340

SHIPPER

Degussa

CARRIER

Chickasaw

QUANTITY CONTAINER DESTINATION RAW MAT CODE # DESCRIPTION

43340 T/T 90ACANT. UNIT #5 SODIUM METHY/PTZ

COMMENTS

C of A present

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

M. Thomas 0830

UNLOADED AT (tank number, unit, warehouse, etc.)

T-5213 UNIT 5

COMMENTS

\$B

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

AP ✓

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

AP ✓

PLANT WEIGHT

UNLOADING TIMES

NET 43440 START TIME 0840 END TIME 1130

COMMENTS

WEIGHED ON A FAIRBANKS SCALE

DATE 12-12-01

CUSTOMERS NAME

Cedar Chair

Contract

Pen 255022-1

ADDRESS

111 Helena Ave

COMMODITY

Sodium methoxide

CARRIER

Chickasaw Contract

REMARKS

79400

07:55AM DE 18 01

35960

11:24AM DE 18 01

43440

LBS. GROSS

LBS. TARE - DRIVER ON _____ OFF _____

LBS. NET @ _____ PER LB. PRICE _____

SHIPPER

WEIGHER

FAIRBANKS SCALE CAT. 083805

degussa.

BILL OF LADING

Shipper's B/L No.

0363119601

Freight Bill of Lading - Short Form - ORIGINAL - NOT NEGOTIABLE
Received Subject to the classification and tariffs in effect on the date of the issue of this Bill of Lading

ORDER NO. 6311960	REL	CONTRACT NO.	CUSTOMER P.O. NO. 646888	ORIGINAL	
CEDAR CHEMICAL CORPORATION 49 PHILLIPS ROAD #311 HELENA, AR 72342			C.O.D. SHIPMENT C.O.D. Amt. _____ Collection Fee _____ Total Charges _____		CHECK BOX INDICATING HOW CHARGES ARE TO BE PAID <input checked="" type="checkbox"/> PREPAID <input type="checkbox"/> COLLECT
<small>The property described below is placed and good order except as noted; contents and condition of contents of packages (packages) marked dangerous and intended to be loaded below unless paid carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to the usual place of delivery of said destination if on its route otherwise to deliver to another carrier on the route to said destination and it is mutually agreed as to each carrier of all or any of said property per all or any portion of said route to destination and as to each party of any time interrupted in all or any of said property that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Freight Bill of Lading set forth (1) in Uniform Freight Classification as shown on the date hereof if this is a rail or a rail water shipment or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. Shipper hereby certifies that it is familiar with all the terms and conditions of the said bill of lading including those on the back thereof set forth in the classification or tariff which governs the transportation of the commodity and the said terms and conditions are hereby agreed to by the shipper and accepted for transit and its assigns.</small>			<small>NOTE: Where the rate is dependent on value the agreed or declared value of the property is hereby specifically stated to be not exceeding _____ 220 cents or _____ per pound for each distribution package. The paper bags used in this shipment conform to the specifications for paper bags rule 40 section 10 (C) of the uniform freight classification. The three boxes and/or drums used for this shipment conform to the specifications set forth in the box makers certificate thereon and all other requirements of the Uniform Freight Classification.</small>		<small>CARRIER NOTE IF DELAYED IN TRANSIT SHIPPER MUST BE ADVISED IMMEDIATELY</small>
Shipped From: 03 THEODORE AL - MOBILE PLAN		SCAC CHIK	CARRIER NAME CHICKASAW CONT SER	DATE SHIPPED 12/17/01	
			TRUCK/CAR NO PCVU 255022-7	IN EMERGENCIES CALL CHEMTREC 800-424-9360	
No and Kind of Pkg.	QTY	Description of Articles Special Marks and Exceptions	GROSS WEIGHT (Sub to Car)	Class of Rate	<small>Subject to section 7 of conditions of applicable bill of lading if said shipment is to be delivered to the consignee without recourse on the consignee the consignee shall sign the following statement: The Carrier shall not make delivery of this shipment without payment of freight and all other lawful charges. DEGUSSA CORP. (Signature of consignee) Rm'd \$ _____ to apply in payment of the charges on the property described herein. Agent or Cashier Per _____ (The signature here Acknowledges only the Amount prepaid) Charges Advanced If the shipment moves between two points by a carrier by water the law requires that the bill of lading shall state whether it is "gross" or "net" weight. The net weight is indicated with an "N" on the bill. <input type="checkbox"/> YES <input type="checkbox"/> NO We hereby certify that we loaded to full shell gallonage capacity. This shipment is correctly described Gross Weight is 78540 LB Subject to Verification by the Weighing and Inspection Bureau According to Agreement Shipper's imprint in lieu of stamp not a part of bill of lading approved by the Interstate Commerce Commission</small>
1 BULK TRUCK		RQ, Sodium Methyleate, Solution 3, UN1289, III	78540	99	
43340		DO NOT BREAK DOWN PALLETS C OF A TENDERED TO DRIVER: <u>E. J.</u> ERG & PLACARDS OFFERED: <u>E. J.</u> NUMBER OF PALLETS: _____ *DELIVERY DATE: 12/18/01 PALLETS WEIGHT: _____			

Shipper Permanent Address:

DEGUSSA CORP.

P.O. BOX 677

PARSIPPANY, NJ 07054-0677

For **JOHN M. RHODES**

Shipping Supervisor

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the department of transportation.

ATTENTION CARRIER - PREPAID ONLY

For payment attach bill of lading to freight bill and send to:

DEGUSSA CORP. c/o FTS PAYMENT PLAN

P.O. BOX 1259, SOMERVILLE, NEW JERSEY 08876-1259

Payment inquiry (908) 526-3824

Carrier: **CHICKASAW CONT SERV**E. J.

12-17-01 AB0000012636

degussa.

DEGUSSA CORPORATION 379 INTERPACE PARKWAY P.O. BOX 677 PARLIFFANY, NJ 07054-0677 (973) 541-8000

PACKING LIST

Shipper's B/L No.

0363119601

ORDER NO. 6311960	REL	DATE RECD 121301	CONTRACT NO.	CUSTOMER P O NO. 646888	PO DATE	PAGE 1
SHIP TO CEDAR CHEMICAL CORPORATION 49 PHILLIPS ROAD #311 HELENA, AR 72342				COD AMOUNT IF A PARTIAL SHIPMENT CALL SALES ORDER DEPT FOR NEW C.O.D AMOUNT *****		FOR 1 - Ship Point 2 - Destination 3 - Ship Pt Per Allowed 4 - Ship Pt Per Eq 5 - Other (see below) STATUS 1 - Complete 2 - Partial EST/ACT A - Actual E - Estimated FOB: P2
SHIP TO AVENTIS CROPS SCIENCES USA LP PO BOX 13985 RESEARCH TRIANGLE PARK, NC 27				CARRIER NAME CHICKASAW CONT SER		DATE SHIPPED 12/17/01
SHIPPING POINT NO & NAME 03 THEODORE AL - MOBILE PLAN				NUMBER CHIK	TRUCK/CAR NO PCVU 255022-7	PREPAID/COLLECT PREPAID
ROUTING INSTRUCTIONS						
Item No.	Ordered Quantity	Unit of Measure	Package Form & Product Abbreviation	No. Pieces	Shipped Quantity	Gross Weight
01 1	BULK TRUCK	-	410325000865 (LOT: 1090406) SODIUM METHYLATE 30% BULK **** DELIVER DEC. 18, 2001 @ 10:00 AM ****	43340	LB 43340	
← TOTALS →				43340	43340	78540

MANUFACTURING INSTRUCTIONS

AB0000012636

RAW MATERIAL RECEIVING RECORD

No 19777

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0940

RECEIVED BY

L. Clark

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

12/21/01 NA 7021 Net NA

SHIPPER

B. Blackhawk

CARRIER

B. Blackhawk

QUANTITY CONTAINER DESTINATION RAW MAT CODE # DESCRIPTION

78 55 gal drum warehouse NA CDM

200 Kg dis.

COMMENTS

mo C of A OK to enter per David Parker

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

L. Clark

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

PLANT WEIGHT

UNLOADING TIMES

NET 34.398

START TIME

END TIME

COMMENTS



SHIPPING ORDER

must be legibly filled in, in ink, in indelible Pencil, or in Carbon, and retained by the Agent

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good or except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA
C/O CEDAR CHEMICAL CORPORATION
49 PHILLIPS RD #311
HELENA AR 72342
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Blackhawk Warehouse
407 Phillips 311 Road
Helena AR 72342
USA

B/L NO.

80123356

Page: 1 of 1

Date: December 21, 2001

CARRIER: ALT CARRIER

VEHICLE NO:

Bm 702

FREIGHT CHARGES: Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and s

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO.	HM	DESCRIPTION	CLASS	ID	P.G.	NAERG	WEIGHT
15600 Kilograms 78 dr	130277		CHEMICALS, N.O.I. CDM DRMP 1X200KG Lot - PN-NR2001/83V 78 drums					34,788 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport.

TOTAL SHIPPING UNITS

78

PLACARDS REQUIRED:

none

DECLARED VALUE OF SHIPMENT**PLACARDS SUPPLIED?**

☐ YES

☐ NO-FURNISHED BY CARRIER

NAERG SUPPLIED?

☐ YES

☐ NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE

TOTAL WEIGHT

34,788 LB

Aventis

P.O. Box 12014

#2 T.W. Alexander Drive

Research Triangle Park, North Carolina 27709

C AMOUNT
O FEE
D TOTAL

Date:

12/21/01

Date:

Shipper:

Audrey

Carrier:

Monty Mooney

Consignee:

L. Clark

AB0000012636

RAW MATERIAL RECEIVING RECORD

No 19936

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

08:50

RECEIVED BY

gnd

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

1-28-02 Auentis 01652 Net 36960

SHIPPER

Auentis

CARRIER

JACOBSON TRANS.

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
64 Drums	B/T	Warehouse	N/A	214-Dea

COMMENTS

NO COFA.

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

Benjamin 10:05

UNLOADED AT (tank number, shift, warehouse, etc)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

PLANT WEIGHT

UNLOADING TIMES

NET START TIME END TIME

COMMENTS

RAW MATERIAL RECEIVING RECORD

No 19924

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

09:40

RECEIVED BY

MO

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
1-25-02	AVENTIS	1816	Net 34788

SHIPPER

AVENTIS

CARRIER

BLACKHAWK

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
34788	B/T	warehouse	NA	CDM

COMMENTS

NO COFA

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
NA	

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
NA			

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
Sael	✓		

PLANT WEIGHT

UNLOADING TIMES

NET 34788

START TIME 9:40

END TIME

COMMENTS



SHIPPING ORDER

must be legibly filled in, in ink, in indelible pencil, or in Carbon, and retained by the Agent

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA
C/O CEDAR CHEMICAL CORPORATION
49 PHILLIPS RD #311
HELENA AR 72342
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Blackhawk Warehouse
407 Phillips 311 Road
Helena AR 72342
USA

B/L NO.

30125191

Page: 1 of 1

Date: January 25, 2002

CARRIER: ALT CARRIER

VEHICLE NO:

BMAP1816

FREIGHT CHARGES: Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send to

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

QUANTITY	MATERIAL NO.	HM	DESCRIPTION	CLASS	ID	P.C.	NAERG	WEIGHT
15600 Kilograms 78dr	130277		CHEMICALS, N.O.I. CDM DRMP 1X200KG To deliver Jan 25th. Lot 2001/830 = 4L 3810011 = 10 3810005 = 6 3810009 = 4 3810006 = 8 01/970 = 4 78dr					34,788 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

TOTAL SHIPPING UNITS

78

PLACARDS REQUIRED:

none

DECLARED VALUE OF SHIPMENT**PLACARDS SUPPLIED?**

☐ YES

☐ NO-FURNISHED BY CARRIER

NAERG SUPPLIED?

☐ YES

☐ NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE

TOTAL WEIGHT

34,788 LB

C AMOUNT

O FEE

D TOTAL

Aventis
P.O. Box 12014
#2 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

Date:

1-25-02

Date:

Shipper:

Aud Myers

Carrier:

Monty Mooney

Consignee:

AB0000012636

RAW MATERIAL RECEIVING RECORD

No 19930

CEDAR CHEMICAL 9MM-1 REV: C

TIME IN AT GATE

10:40

RECEIVED BY

MD

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

1-26-02

AVENTIS

BV504240452

Net 19,760 kg

SHIPPER

AVENTIS

CARRIER

CULF STATE

QUANTITY

CONTAINER

DESTINATION

RAW MAT CODE #

DESCRIPTION

19,760 kg

T/R

UNIT #5

N/A

500 Divn methylate

COMMENTS

C OF A IN lab.

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

B. J. J. J.

UNLOADED AT (tank number, unit, warehouse, etc.)

T-5217 T-5213

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

OT

✓

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

H. S. H. S.

✓

PLANT WEIGHT

UNLOADING TIMES

NET 43,540

START TIME

END TIME

COMMENTS

WEIGHED ON A FAIRBANKS SCALE

DATE

1-26-02

CUSTOMER'S NAME

Cedar Chemical

ADDRESS

COMMODITY

Sodium methyrate

CARRIER

Aventis

REMARKS

LBS. GROSS

LBS. TARE - DRIVER ON OFF

LBS. NET @ PER LB. PRICE

SHIPPER

WEIGHER

79580 10:39AM JA 26 02

36040 02:13PM JA 26 02

43540

FAIRBANKS SCALE CAT. 083908

1-800-851-5522

NO. 100

FAIRBANKS SCALES

RAW MATERIAL RECEIVING RECORD

No 19871

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE		SECTION 1		RECEIVED BY	
DATE		ORDER NO.		DECLARED WEIGHT	
1-14-02		NA		Net 34788	
SHIPPER			CARRIER		
Aventis			Black Hawk		
QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION	
34788	B/T	warehouse	N/A	CDM Dimp	
78ds @ 200kg ea.					
COMMENTS					
NO COFA					
SECTION 2					
RECIPIENT		TIME SAMPLE/CERTIFICATE TAKEN TO LAB			
Benjamin		1-14-02			
UNLOADED AT (tank number, unit, warehouse, etc.)					
COMMENTS					
SECTION 3					
LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION		
COMMENTS					
SECTION 4					
SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION		
PLANT WEIGHT	UNLOADING TIMES				
NET 34.398	START TIME		END TIME		
COMMENTS					

RAW MATERIAL RECEIVING RECORD

No 19897

CEDAR CHEMICAL 9MM-1 REV: C

TIME IN AT GATE

1035

RECEIVED BY

04

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

1/18/02

aventis

994802

Net 36960

SHIPPER

Avantis

CARRIER

Wright Distribution

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
64 @ 250 Kgs ea.	drums	warehouse	NA	2,4 DCA

COMMENTS

not C of A required

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

PLANT WEIGHT

NET 35.264

COMMENTS/b5.

UNLOADING TIMES

START TIME

END TIME



SHIPPING ORDER

must be legibly filled in, in ink, in indelible pencil, or
in Carbon, and retained by the AgentReceived, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order,
except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA
C/O CEDAR CHEMICAL CORPORATION
49 PHILLIPS RD #311
HELENA AR 72342
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Wright Distribution Center
1000 Hanthorn Road
Lima OH 45804
USA

B/L NO.

80124429

Page: 1 of 1

Date: January 16, 2002

CARRIER:

JACKSON TRANS

WRIGHT TRANSPORT

991806 FREIGHT CHARGES: Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

4427

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08878-1259

QUANTITY	MATERIAL NO. HM	DESCRIPTION	CLASS	ID	P.C.	NAERG	WEIGHT
64 Drums	109671	X DICHLOROANILINE, SOLID MARINE POLLUTANT CHEMICALS, N.O.I. 2,4-DCA (2,4-DICHLOROANILINE) 1X250KG To deliver January 21st (70-512-1701)	6.1 ORM	UN1590	II	153	36,960 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

16

PLACARDS REQUIRED:

UN 1590

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED?

☒ YES☐ NO-FURNISHED BY CARRIER

NAERG SUPPLIED?

☐ YES☐ NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE: [Signature]

TOTAL
WEIGHT

36,960 LB

C AMOUNT
O FEE
D TOTALAventis
P.O. Box 12014
#2 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

Date:

1-16-02

Date:

Shipped:

[Signature]

Carrier:

[Signature]

Consignee:

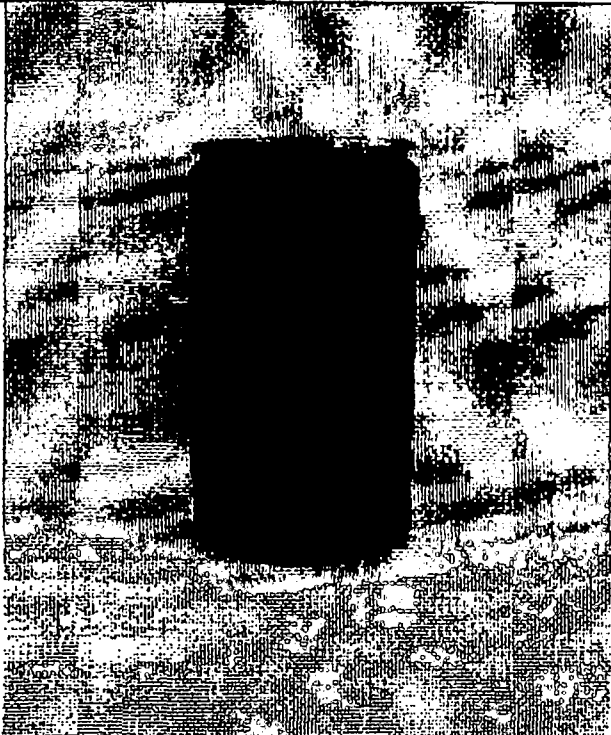
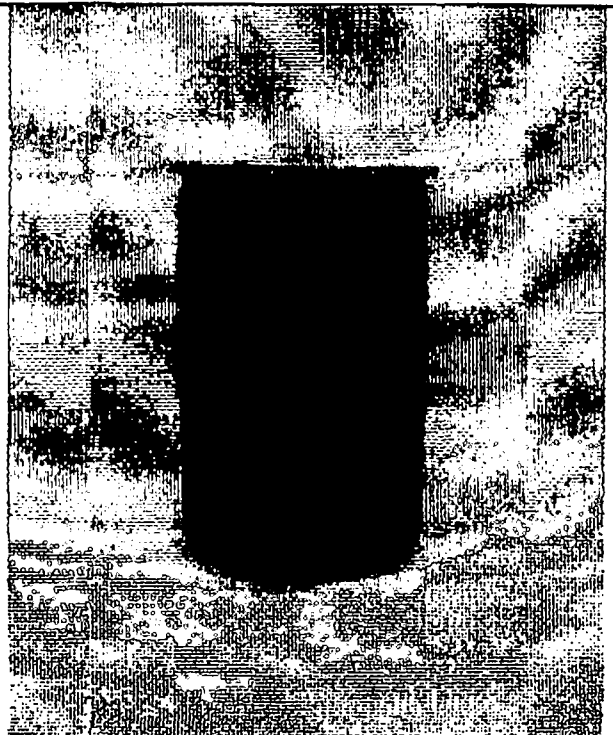
3 - CARRIER

20100-L

AB0000012636

GREIF BROS. CORPORATION
INDUSTRIAL SHIPPING CONTAINER GROUP

LaPorte Product Comparison

Convert From:	Convert To:																																
POH30	OS-30																																
																																	
<p align="center"><u>Technical Data</u></p> <table> <tr><td>Drum Height:</td><td>31.5"</td></tr> <tr><td>Drum Diameter:</td><td>18.4"</td></tr> <tr><td>Opening I.D.</td><td>15.5"</td></tr> <tr><td>Total Weight:</td><td>12.9 lbs</td></tr> <tr><td>Overflow Capacity:</td><td>31.2 gallons</td></tr> <tr><td>Midpanel Height:</td><td>16.6"</td></tr> <tr><td>Export Cubes:</td><td>6.69</td></tr> <tr><td>Regulatory Information:</td><td>X150</td></tr> </table>	Drum Height:	31.5"	Drum Diameter:	18.4"	Opening I.D.	15.5"	Total Weight:	12.9 lbs	Overflow Capacity:	31.2 gallons	Midpanel Height:	16.6"	Export Cubes:	6.69	Regulatory Information:	X150	<p align="center"><u>Technical Data</u></p> <table> <tr><td>Drum Height:</td><td>29.4"</td></tr> <tr><td>Drum Diameter:</td><td>19.3"</td></tr> <tr><td>Opening I.D.</td><td>17.5"</td></tr> <tr><td>Total Weight:</td><td>14.6 lbs</td></tr> <tr><td>Overflow Capacity:</td><td>32.2 gallons</td></tr> <tr><td>Midpanel Height:</td><td>11.4"</td></tr> <tr><td>Export Cubes:</td><td>6.94</td></tr> <tr><td>Regulatory Information:</td><td>Y180 X125</td></tr> </table>	Drum Height:	29.4"	Drum Diameter:	19.3"	Opening I.D.	17.5"	Total Weight:	14.6 lbs	Overflow Capacity:	32.2 gallons	Midpanel Height:	11.4"	Export Cubes:	6.94	Regulatory Information:	Y180 X125
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Regulatory Information:	Y180 X125																																
	<p align="center"><u>Advantages</u></p> <ul style="list-style-type: none"> • Higher overflow capacity. • Lower center of gravity for easier handling. • Industry standard dimensions for replacement of components. • Produced in this specification at two different locations. 																																



SHIPPING ORDER

MUST BE REPRODUCED IN FULL, ON SEPARATE FORMS, IN
in Carbon, and retained by the Agent

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA
C/O CEDAR CHEMICAL CORPORATION
49 PHILLIPS RD #311
HELENA AR 72342
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Blackhawk Warehouse
407 Phillips 311 Road
Helena AR 72342
USA

B/L NO.

80124428

Page: 1 of 1

Date: January 14, 2002

CARRIER: ALT CARRIER

VEHICLE NO.: 8M/27299

FREIGHT CHARGES: Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS. _____

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send to

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO.	HM	DESCRIPTION	CLASS	ID	P.G.	NAERG	WEIGHT
15600 Kilograms 78 drums	130277		CHEMICALS, N.D.I. CDM DRMP 1X200KG To deliver January 15th Lot 01/97V=4 3810011=15 3810006=13 3810005=13 3810009=11 2001/83V=22 78dr Benni Ford					34,788 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

TOTAL SHIPPING UNITS

78

PLACARDS REQUIRED

NONE

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED?

☐ YES☐ NO-FURNISHED BY CARRIER☐ YES☐ NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE _____

TOTAL
WEIGHT

34,788 LB

C AMOUNT
O FEE
D TOTALAventis
P.O. Box 12014
#2 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

Date: 1-14-02

Date: _____

Shipper: Audm

Carrier: Monty Mooney

Consignee: _____

2 - SHIPPING LOCATION

AB0000012636

CEDAR CHEMICAL CORPORATION
SUITE 2414, 5100 POPLAR AVE.
MEMPHIS, TN 38137

PHONE: 901/685-5348

I N V O I C E E D I T

2/07/01 47983 3/02/01

42546

ZENECA AGRICHEMICALS INC.
COLD CREEK PLANT
AG PRODUCTS
P. O. BOX 32
BUCKS AL 36512

4740-04

*** SHIPPED COMPLETE ***

ZENECA INC. AGRICHEMICALS
824 E. 12TH STREET
NORTH LITTLE ROCK AR 72115

04

CEDAR CHEMICAL CORPORATION
P.O. BOX 2900
DEPARTMENT 161
MEMPHIS, TN 38101-2900

0/00/00 4740-04 47983-000 48164994 8 C. MCGEE COLLECT
4 WEST HELENA PLANT NET DUE 30 DAYS

5120 ACIFLUORFEN
C 3682 4300

kg 169,123.36

TO INVOICE YOU FOR THE SHIPMENTS OF 100% ACIFLUORFEN FOR THE
PERIOD ENDING JANUARY 31, 2001 ALL FROM PCE PRODUCTION
AS FOLLOWS:

DATE	B/L#	NET WT	%AI	100%AI	100%KG
01/16/01	20304351	46,380	39.30	18,227	8,268
01/22/01	20304352	47,180	40.40	19,061	8,646
01/23/01	20304354	45,860	40.00	18,344	8,321
01/29/01	20306070	45,280	39.40	17,840	8,092
01/30/01	20306071	46,960	39.10	18,361	8,329
SUB TOTALS		231,660	39.64	91,834	41,656

PRODUCTION FEE:

41,656 X \$4.06 = \$169,123.36

PAY THIS AMOUNT

169,123.36

Trish

From: "Chris McGee" <mcgee@cvrtmail.com>
To: "Trish" <trish@cvrtmail.com>
Cc: "Jim Rone" <jrone@cvrtmail.com>; "neil robbins" <nrobbins@cvrtmail.com>
Sent: Monday, February 05, 2001 10:46 AM
Subject: RE: Custom Invoicing

Trish,

47981 ✓ Please invoice Cymetech for \$225,000 per month until July or I communicate a different billing rate.

47983 ✓ Please invoice Zeneca at \$4.06/kg for production in 2001.

Please invoice Zeneca for \$214,998.5 for December. This is to cover the shortage for the year 2000.
(1000 MT - 904.446 MT) * \$2250/MT = \$214,998.50

47985 Thanks in Advance

Chris McGee

-----Original Message-----

From: Trish [mailto:trish@cvrtmail.com]
Sent: Wednesday, January 31, 2001 3:34 PM
To: Chris McGee
Cc: Jim Rone
Subject: Custom Invoicing

Chris,

It's that time again to invoice our customers for production. I will be invoicing Zeneca for Acifuorfen shipments at \$4.85 per kg and Cymetech for Telena production at \$215,000 for the month of January. Please let me know if these numbers are incorrect. If I don't hear from you, I will assume that they are agreeable.

Invoicing for Richman Chemical for Mace, and Aventis for Cyclanilide are a different story. I would usually get billing information from Dale. Neil asked me to get with you to find out what to do with these two accounts.

Let me know as soon as possible.

Thanks,

Trish

2/5/01

AB0000092113

Thursday, February 01, 2001

Acifluorfen Shipments for the Period From 1/1/01 To 1/31/01

Month - Year	# Date	B B/L	Lot	Cont#	Gross	Tare	Net	% Active	5120 100% AI	100% Kg
January 2001										
	1/18/01	20304351	ACI01115-01	SP1802	76,940	30,560	46,380	39.30%	18,227	8,268
	1/22/01	20304352	ACI01122-01	SP1054	77,980	30,800	47,180	40.40%	19,061	8,646
	1/23/01	20304354	ACI01123-01	SP2343	77,520	31,660	45,860	40.00%	18,344	8,321
	1/29/01	20306070	ACI01129-01	SP2264	74,600	29,320	45,280	39.40%	17,840	8,092
	1/30/01	20306071	ACI10030-01	SP2238	75,840	28,880	46,960	39.10%	18,361	8,329
Period Totals:					382,880	151,220	231,660	39.64%	91,834	41,658

#42503

Straight Bill of Lading - Short Form
Original - Not Negotiable

[illegible]

RECORDED subject to the stipulations and hereby subject on the date of the issue of the Bill of Lading

[illegible]

CARRIER/ROUTE MATLACK		DATE SHIPPED 01/16/01		PAGE 1 OF 1	
SHIP TO: ZENECA AG PRODUCTS INC. COLD CREEK PLANT HIGHWAY 43 BUCKS, AL 36512		TANK CAR INITIAL/ VEHICLE NO. SP1802		SEAL NO. 5P1802	
CUSTOMER PO No. LOAD 344		SHIPPER: CEDAR CHEMICAL CORPORATION HIGHWAY 242 SOUTH WEST HELENA, AR 72390		FREIGHT CHARGES: FREIGHT PREPAID <input checked="" type="checkbox"/> (except when box is left to checked, charges are to be collected)	
NO. PKG. 1 TT		DESCRIPTION The product names listed are trademarks of ZENECA group companies ACIFLUORFEN-SODIUM SALT SOLUTION NOT REGULATED BY DOT SEAL # 19264/19265 19287 LOT # ACI01115-01 PLEASE DELIVER TO ZENECA AT 0700 HRS ON 01/17/01		BILL NO. MUST BE SHOWN ON EACH FREIGHT BILL MASTER BILL NUMBER 20304351 INC NUMBER 20304351 ORDER NO. 45190445	
TOTAL NO. OF PIECES 1 TT SP1802		TOTAL GROSS WEIGHT (KG) 76940		TOTAL GROSS WEIGHT (LBS) 76940	
REMARKS: SEND FREIGHT BILL TO: ZENECA AG PRODUCTS INC. COLD CREEK PLANT PO BOX 32 BUCKS, AL 36572 ATTENTION: ACCOUNTS PAYABLE		PLACARD REQUIREMENT BY SIGNING THIS BILL OF LADING, CARRIER ACKNOWLEDGES POSSESSION OF PLACARDS AND SUBSISTENT INFORMATION FOR HAZARDOUS MATERIALS DESCRIBED. NA		For help in chemical emergencies call CHEMTREC 800-424-9300 day night PLACARDS SUPPLIED <input type="checkbox"/> YES <input type="checkbox"/> OFFERED <input type="checkbox"/> NO <input type="checkbox"/> AFFIXED	

(SHIPPER)
ZENECA Inc.

(CARRIER)

Permanent post-office of shipper: 1800 Concord Pike, Wilmington DE 19897
73-2001 REV 10-84

AB0000092113



REV. A

49 PHILLIPS RD. 311 • HELENA, AR 72342 • (870) 572-3701 • FAX (870) 572-3795

**ACIFLUORFEN ACID
SODIUM SALT SOLUTION****CERTIFICATE OF ANALYSIS**

Lot No.: ACI01115-01

Shipment Date: 1/15/01

Container No. : SP1802

B.O.L. No.: 20304351

Properties**Specification****Results**

Strength	38-42 % w/w as Acifluorfen acid	: 39.3
R118118	max. 0.5 %	: ND
Isomer Ratio	max. 0.085	: 0.0762
Dinitro 1-3 impurities	max. 1.0 % (Sum of 3)	: 0.44
Trinitro impurities	max. 0.3 %	: 0.06
Acetate	max. 1.0 %	: 0.16
PCE	max. 100 ppm	: 35.9
Fluoride Ion	40 ppm Target	: 39.3
Ph	6.8-8.6	: 7.4
Iron	30 ppm Target	: 2.0

Other Properties**Other Requirements****Results**:
:
:
:
:1-15-01

Date

A handwritten signature in cursive script that reads "Troy Peppers".

Quality Assurance

Straight Bill of Lading - Short Form **Original - Not Negotiable**

Shipment is not insurable and goods loading on the date of the date of the Bill of Lading

This bill of lading is subject to the terms and conditions of the bill of lading contract and the carrier's liability is limited to the amount of the freight and charges. The carrier is not responsible for the loss of or damage to the goods if the loss or damage is caused by the act of God, war, piracy, or any other cause beyond the control of the carrier. The carrier is not responsible for the loss of or damage to the goods if the loss or damage is caused by the act of the shipper or the consignee. The carrier is not responsible for the loss of or damage to the goods if the loss or damage is caused by the act of the consignee.

CARRIER/ROUTE **MATLACK** **DATE SHIPPED** **01/22/00** **PAGE** **1 OF 1**

SHIP TO:
ZENECA AG PRODUCTS INC.
COLD CREEK PLANT
HIGHWAY 43
BUCKS, AL 36512

TANK CAR DETAIL/VEHICLE NO. **SP1054**

SEAL NO. _____

FREIGHT CHARGES: FREIGHT PREPAID ☒ Except when box of bill is checked (Check if charges are to be collected)

Shipment is subject to the terms and conditions of the bill of lading contract and the carrier's liability is limited to the amount of the freight and charges. The carrier is not responsible for the loss of or damage to the goods if the loss or damage is caused by the act of God, war, piracy, or any other cause beyond the control of the carrier. The carrier is not responsible for the loss of or damage to the goods if the loss or damage is caused by the act of the shipper or the consignee. The carrier is not responsible for the loss of or damage to the goods if the loss or damage is caused by the act of the consignee.

Signature of Consignor: _____

CUSTOMER PO No. **LOAD 345**

SHIPPER:
CEDAR CHEMICAL CORPORATION
HIGHWAY 242 SOUTH
WEST HELLENA, AR 72390

Forward Invoice for prepaid freight to:
ZENECA AG PRODUCTS INC.
COLD CREEK PLANT
PO BOX 32
BUCKS, AL 36572
ATTENTION: ACCOUNTS PAYABLE

BL NO. MUST BE SHOWN ON EACH FREIGHT BILL
MASTER BL NUMBER **20304352**
BL NUMBER **20304352**
ORDER NO. **45190446**

NO. PKGS.	HM	DESCRIPTION	NET QTY. UNITS	GROSS WEIGHT
		The product names listed are trademarks of ZENECA group companies		
1 TT		ACIFLUORFEN-SODIUM SALT SOLUTION NOT REGULATED BY DOT Top 17832 .17824 SEAL #17826 Bottom 17831 Other 17830/17827 LOT# ACI 01122-01 PLEASE DELIVER TO ZENECA AT 0700 HRS ON 01/23/01	8648 A.R.	7798 Gross 3088 Tare 4710 Net 40. Net

TOTAL NO. OF PIECES **1 TT** **TOTAL GROSS WEIGHT (KG)** **7798** **TOTAL GROSS WEIGHT (LBS)** **7798**

REMARKS:

SEND FREIGHT BILL TO: **ZENECA AG PRODUCTS INC.**
COLD CREEK PLANT
PO BOX 32
BUCKS, AL 36572
ATTENTION: ACCOUNTS PAYABLE

For help in chemical emergencies call
CHEMTREC
800-424-9300
day night

I HEREBY DECLARE THAT THE CONTENTS OF THIS BILL OF LADING ARE TRUE AND ACCURATELY REPRESENTED BY THE SHIPPER HEREIN SIGNED, AND ARE CLASSIFIED, PACKAGED, MARKED AND LABELED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS FOR THE TRANSPORTATION OF DANGEROUS GOODS.

BY SIGNING THIS BILL OF LADING, SHIPPER OR AUTHORIZED REPRESENTATIVE OF SHIPPER IS ACKNOWLEDGING RESPONSIBILITY FOR HAZARDOUS MATERIALS INCORPORATED.

PLACARD REQUIREMENT
NA

PLACARDS SUPPLIED
☐ YES ☐ OFFERED
☐ NO ☐ AFFIXED

(SHIPPER) **ZENECA Inc.** **(CARRIER)** **Matthew K. ...** **DATE/TIME** **1-22-01**

Permanent post-office of shipper: 1800 Concord Pike, Wilmington DE 19807 20-0001 REV. 1994



REV. A

49 PHILLIPS RD. 311 • HELENA, AR 72342 • (870) 572-3701 • FAX (870) 572-3785

**ACIFLUORFEN ACID
SODIUM SALT SOLUTION****CERTIFICATE OF ANALYSIS**

Lot No.: ACI01122-01

Shipment Date: 01-22-01

Container No. : SP 1054

B.O.L. No.: 20304352

<u>Properties</u>	<u>Specification</u>	<u>Results</u>
Strength	38-42 % w/w as Acifluorfen acid	: 40.4
R118118	max. 0.5 %	: 0.1
Isomer Ratio	max. 0.085	: 0.0791
Dinitro 1-3 impurities	max. 1.0 % (Sum of 3)	: 0.6
Trinitro impurities	max. 0.3 %	: ND
Acetate	max. 1.0 %	: 0.2
PCE	max. 100 ppm	: 34.8
Fluoride Ion	40 ppm Target	: 41.8
Ph	6.8-8.6	: 7.2
Iron	30 ppm Target	: 1.0

<u>Other Properties</u>	<u>Other Requirements</u>	<u>Results</u>
: PLEASE NOTE MATERIAL DOES NOT MEET THE TARGET FOR FLUORIDE		
:		
:		
:		
:		

01-22-01

Date

A handwritten signature in dark ink, appearing to read "John Hill", is written over a horizontal line. Below the line, the words "Quality Assurance" are printed.
Quality Assurance

WITNESSES to the execution and terms hereof on the date of the above of this 25th of January

[illegible]

Shopper Inquiry section: Call us to find out more about the time and location of the sale and the items on sale. We will be happy to help you find the items you are looking for. We will also be happy to help you find the items you are looking for.

CUSTOMER PO No.

LOAD 346

1.6.1.1.1.1.1.1.1.1

**CEDAR CHEMICAL CORPORATION
HIGHWAY 242 SOUTH
WEST HELENA, AR 72390**

TANK CAR INITIALS
VEHICLE NO.

SP 2343

SEAL NO.**FREIGHT CHARGES: FREIGHT PREPAID**

Except when box at left is checked
(Check if charges are to be collected)

Subject to Section 7 of Schedule 1 of the 1992 Act of Telling, if this agreement is to be delivered in the language of most countries on the continent, the language shall also be following agreement. The entire shall not make delivery of this agreement without consent of both and all other legal changes.

Signature of Consignor:

Freight Invoiced for prepaid freight to:

**B/L NO. MUST BE SHOWN
ON EACH FREIGHT BILL**

ZENECA AG PRODUCTS INC.
COLD CREEK PLANT

PO BOX 32
BUCKS, AL 36572
ATTENTION: ACCOUNTS
PAYABLE

MASTER BA NUMBER
20304354

BL NUMBER 20304354

ORDER NO. 45190447

TOTAL NO. OF PAGES: 1

1 TT

TOTAL GROSS WEIGHT (KG)

TOTAL GROSS WEIGHT (LBS)

REMARKS:

SEND FREIGHT BILL TO: ZENECA AG PRODUCTS INC.
COLD CREEK PLANT
PO BOX 32
BUCKS, AL 36572
ATTENTION: ACCOUNTS PAYABLE

**For help in chemical
emergencies call
CHEMTREC
800-424-9300
day night**

6 HEREBY DECLARE THAT THE CONTENTS OF THIS DOCUMENT ARE FULLY AND ACCURATELY REPRODUCED FROM THE ORIGINAL SOURCE AND ARE CLASSIFIED, PACKAGED, MARKED AND LABELED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE COMMISSION FOR INFORMATION SECURITY.

BY SINGING THE SELL OF LARNED, CANNONER ACKNOWLEDGES POSSESSION OF FLAMMABLE AND EXTREMELY INFORATION FOR HAZARDOUS MATERIALS

PLACARD REQUIREMENT

NA

PLACARDS SUPPLIED

☐ YES ☐ OFFERED
☐ NO ☐ AFFIXED

Mark A Buick
(SHIPPER)
ZENECA Inc

Cliff Dawson
(CARRIER)

DATE/TIME 1-23-01 23:06

Permanent post-office of shipper: 1800 Concord Pike, Wilmington DE 19807
 ZE-0001 65V. 1004



REV. A

49 PHILLIPS RD. 311 • HELENA, AR 72342 • (870) 572-3701 • FAX (870) 572-3798

**ACIFLUORFEN ACID
SODIUM SALT SOLUTION****CERTIFICATE OF ANALYSIS**

Lot No.: ACI01123-01

Shipment Date: 01-23-2000

Container No. : SP2343

B.O.L. No.: 20304354

<u>Properties</u>	<u>Specification</u>	<u>Results</u>
Strength	38-42 % w/w as Acifluorfen acid	: 40.0
R118118	max. 0.5 %	: 0.13
Isomer Ratio	max. 0.085	: 0.0794
Dinitro 1-3 impurities	max. 1.0 % (Sum of 3)	: 0.70
Trinitro impurities	max. 0.3 %	: 0.10
Acetate	max. 1.0 %	: 0.10
PCE	max. 100 ppm	: 29.4
Fluoride Ion	40 ppm Target	: 24.4
Ph	6.8-8.6	: 7.30
Iron	30 ppm Target	: 2.00

<u>Other Properties</u>	<u>Other Requirements</u>	<u>Results</u>
:		
:		
:		
:		
:		

01-23-01

Date

A handwritten signature in dark ink, appearing to read "Charles L. Lamm", is written over a horizontal line.

Quality Assurance



REV. A

49 PHILLIPS RD. 311 • HELENA, AR 72342 • (870) 572-3701 • FAX (870) 572-3785

**ACIFLUORFEN ACID
SODIUM SALT SOLUTION**

CERTIFICATE OF ANALYSIS

Lot No.: ACI01129-01

Shipment Date: 01-29-2001

Container No. : SP2264

B.O.L. No.: 20306070

<u>Properties</u>	<u>Specification</u>	<u>Results</u>
Strength	38-42 % w/w as Acifluorfen acid	: 39.4
R118118	max. 0.5 %	: 0.18
Isomer Ratio	max. 0.085	: 0.0801
Dinitro 1-3 impurities	max. 1.0 % (Sum of 3)	: 0.81
Trinitro impurities	max. 0.3 %	: 0.08
Acetate	max. 1.0 %	: 0.10
PCE	max. 100 ppm	: 13.3
Fluoride Ion	40 ppm Target	: 38.0
Ph	6.8-8.6	: 7.10
Iron	30 ppm Target	: 2.00

<u>Other Properties</u>	<u>Other Requirements</u>	<u>Results</u>
:		
:		
:		
:		
:		

01-29-01
Date

Charlie Lenz
Quality Assurance

I, the undersigned, hereby certify that the enclosed copy of the minutes and conclusions of the 34th meeting of the Executive Committee of the United Negro College Fund, dated March 19, 1964, is a true and correct copy of the original copy of the minutes and conclusions of the meeting of the Executive Committee of the United Negro College Fund, dated March 19, 1964, and that the enclosed copy of the minutes and conclusions of the meeting of the Executive Committee of the United Negro College Fund, dated March 19, 1964, is a true and correct copy of the original copy of the minutes and conclusions of the meeting of the Executive Committee of the United Negro College Fund, dated March 19, 1964.

EXCLUDED, subject to the circumstances and limits imposed on the issue of the bonds of the BOP of London

Slipper hereby certifies that this is a true and correct copy of the text and content of the original copy of the document, and that the text and content are hereby agreed to by the Slippers and the Slippers.

NO. PKG.	HM	DESCRIPTION The product names listed are trademarks of ZENECA group companies	NET QTY. UNITS	GROSS WEIGHT
1 TT		ACIFLUORFEN-SODIUM SALT SOLUTION NOT REGULATED BY DOT 17873 17874 17862 SEAL # <u>17865</u> LOT # <u>Acio1190-01</u> 17868 17866 17861 17864 17872 17843 _____ PLEASE DELIVER TO ZENECA AT <u>1300</u> HRS ON <u>1/31/01</u>	<u>8329</u> A.K.	<u>75840</u> Gross <u>28880</u> Tare <u>46960</u> Net

TOTAL NO. OF PIECES 1 TT		TOTAL GROSS WEIGHT (KG)	TOTAL GROSS WEIGHT (LBS)
REMARKS: SEND FREIGHT BILL TO: ZENECA AG PRODUCTS INC. COLD CREEK PLANT PO BOX 32 BUCKS, AL 36572 ATTENTION: ACCOUNTS PAYABLE			For help in chemical emergencies call CHEMTREC 800-424-9300 day night
I HEREBY DECLARE THAT THE CONTENTS OF THIS CONTAINER ARE NOT AND WILL NOT BE ADVERSELY EFFECTED BY THE PROPOSED SHIPPING NAME, AND ARE CLASSIFIED PROHIBITED, LIMITED, OR EXCEPTED, AND ARE IN ALL RESPECTS IN PROPER COMPLIANCE WITH THE PROVISIONS OF THE HAZARDOUS MATERIALS REGULATIONS.		BY SIGNING THIS BILL OF LADING, CARRIER ASSUMES RESPONSIBILITY FOR THE PROPER PACKAGING AND LABELING OF THE MATERIALS FOR TRANSPORTATION.	PLACARD SUPPLIED <input type="checkbox"/> YES <input type="checkbox"/> OFFERED <input type="checkbox"/> NO <input type="checkbox"/> AFFIXED
		PLACARD REQUIREMENT NA	

MacArthur *Alt-Hill*
 (SHIPPER) (SHIPPER)
 ZENeca Inc. DATE/TIME 1-30-01
 Permanent post-office of shipper: 1000 Concord Pike, Wilmington DE 19897



REV. A

49 PHILLIPS RD. 311 • HELENA, AR 72342 • (870) 572-3701 • FAX (870) 572-3795

**ACIFLUORFEN ACID
SODIUM SALT SOLUTION**

CERTIFICATE OF ANALYSIS

Lot No.: ACI01130-01

Shipment Date: 01-30-2001

Container No. : SP2238

B.O.L. No.: 20306071

<u>Properties</u>	<u>Specification</u>	<u>Results</u>
Strength	38-42 % w/w as Acifluorfen acid	: 39.1
R118118	max. 0.5 %	: 0.14
Isomer Ratio	max. 0.085	: 0.0797
Dinitro 1-3 impurities	max. 1.0 % (Sum of 3)	: 0.46
Trinitro impurities	max. 0.3 %	: 0.08
Acetate	max. 1.0 %	: 0.16
PCE	max. 100 ppm	: 21.6
Fluoride Ion	40 ppm Target	: 45.6
Ph	6.8-8.6	: 7.30
Iron	30 ppm Target	: 1.00

<u>Other Properties</u>	<u>Other Requirements</u>	<u>Results</u>
:		
:		
:		
:		
:		

Date


Quality Assurance

CEDAR CHEMICAL CORPORATION
SUITE 2414, 5100 POPLAR AVE.
MEMPHIS, TN 38137

PHONE: 901/685-5348

I N V O I C E E D I T

2/07/01 47985 3/09/01

4254

ZENECA AGRICHEMICALS INC.
COLD CREEK PLANT
AG PRODUCTS
P. O. BOX 32
BUCKS AL 36512

4740-04

*** SHIPPED COMPLETE ***

ZENECA INC. AGRICHEMICALS
824 E. 12TH STREET
NORTH LITTLE ROCK AR 72115

04

CEDAR CHEMICAL CORPORATION
P.O. BOX 2900
DEPARTMENT 161
MEMPHIS, TN 38101-2900

0/00/00 4740-04 47985-000 AGREEMENT 8 C. MCGEE COLLECT
4 WEST HELENA PLANT NET DUE 30 DAYS

5120 ACIFLUORFEN
C 3682 4300

kg 214,996.50

E
E
E
E
TO INVOICE YOU \$215,030.25 FOR CONTRACT SHORTFALL.
THIS IS TO COVER THE SHORTAGE FOR THE YEAR 2000.

(1,000 MT LESS 904.431 MT) X \$2,280/MT = \$215,030.25

PAY THIS AMOUNT

214,996.50

Trish

From: "Chris McGee" <mcgee@cvrtmail.com>
To: "trish hunter" <trish@cvrtmail.com>; "neil robbbins" <nrobbins@cvrtmail.com>
Sent: Thursday, February 08, 2001 10:38 AM
Subject: FW: Cedar Invoices

-----Original Message-----

From: julian.gregory@syngenta.com [<mailto:julian.gregory@syngenta.com>]
Sent: Thursday, February 08, 2001 8:51 AM
To: david.fesperman@syngenta.com; robin.shubra@syngenta.com;
mcgee@cvrtmail.com; glen.robinson@syngenta.com; julian.gregory@syngenta.com
Subject: Cedar invoices

Dave,

I will talk to Robin check if we have a problem with booking in the December invoice.

Also, I spoke with Chris McGee at Cedar last week, we confirmed to use the shipped volume as the basis for the 2000 shortfall, both our numbers were within a few kg's. Cold Creek reported shipped in 2000 904,431kg

Therefore, Cedar should invoice for contract shortfall for
 $(1000000-904431)*2.25 = \215030.25

Glen Robinson accrued for (at least some of) this so we need to ensure that we offset against that,

thanks Julian

2/8/01

AB0000092110

Trish

From: "Chris McGee" <mcgee@cvrtmail.com>
To: "Trish" <trish@cvrtmail.com>
Cc: "Jim Rone" <jrone@cvrtmail.com>; "neil robbins" <nrobbins@cvrtmail.com>
Sent: Monday, February 05, 2001 10:48 AM
Subject: RE: Custom Invoicing

Trish,

47981 ✓ Please invoice Cymetech for \$225,000 per month until July or I communicate a different billing rate.

47983 ✓ Please invoice Zenica at \$4.06/kg for production in 2001.

47985 Please invoice Zenica for \$214,998.5 for December. This is to cover the shortage for the year 2000.
(1000 MT - 904.446 MT) * \$2250/MT = \$214,998.50

Thanks in Advance

Chris McGee

-----Original Message-----

From: Trish [mailto:trish@cvrtmail.com]
Sent: Wednesday, January 31, 2001 3:34 PM
To: Chris McGee
Cc: Jim Rone
Subject: Custom Invoicing

Chris,

It's that time again to invoice our customers for production. I will be invoicing Zeneca for Acifuorfen shipments at \$4.85 per kg and Cymetech for Telene production at \$215,000 for the month of January. Please let me know if these numbers are incorrect. If I don't hear from you, I will assume that they are agreeable.

Invoicing for Richman Chemical for Mace, and Aventis for Cycilanilide are a different story. I would usually get billing information from Dale. Neil asked me to get with you to find out what to do with these two accounts.

Let me know as soon as possible.

Thanks,

Trish

2/5/01

AB0000092110

May 08, 2001

Delivery: 80096430
Del. Created By: Craig Dodson
Route: 000033

Requested Date: May 15, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB7
AVENTIS CROPSCIENCE USA LP
% WRIGHT DISTRIBUTION CENTER I
1-75 EXIT 122
1000 HANTHORN RD
LIMA OH 45804
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	108671	2,4-DCA (2,4-DICHLOROANILINE)1X100KG DRM	72	DRM		18720	LB
Order#: 710509		Order Taken By: Craig Dodson					

Picked by:

Total Shipping units:

Gross Weight 18720 LB
AB0000028806

To: +8705723795

From: AgrEvo

Fax:

TOPCALL at: MAY-08-2001-13:00 Doc: 656 Page: 001
Page 1 of 1

May 08, 2001

Delivery: 80096429
Del. Created By: Craig Dodson
Route: 000033

Requested Date: May 14, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB7
AVENTIS CROPSOURCE USA LP
% WRIGHT DISTRIBUTION CENTER I
1-75 EXIT 122
1000 HANTHORN RD
LIMA OH 45804
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	109671	2,4-DCA (2,4-DICHLOROANILINE)1X100KG DRM	72	DRM	_____	18720	LB
Order #:		710508	Order Taken By: Craig Dodson				

Picked by:

Total Shipping units:

Gross Weight 18720 LB
AB0000028806

May 08, 2001

Delivery: 80096431
 Del. Created By: Craig Dodson
 Route: 000033

Requested Date: May 16, 2001
 Carrier: ROUTING GUIDE
 Freight Charges: Prepaid

SHIP-TO: USB7
 AVENTIS CROPSCIENCE USA LP
 % WRIGHT DISTRIBUTION CENTER I
 1-75 EXIT 122
 1000 HANTHORN RD
 LIMA OH 45804
 USA

SHIP-FROM: USD7
 Aventis CropScience
 c/o Cedar Chemical Corporation
 49 Philips Road #311
 Helena AR 72342
 USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	109671	2,4-DCA (2,4-DICHLOROANILINE)1X100KG DRM	23	DRM		5980	LB
Order#: 710510		Order Taken By: Craig Dodson					

12 Drums
 31680 net
 38000 Gross

6 pallets
 1020
 net
 12600

Picked by:

Total Shipping units:

Gross Weight 5980 LB
 AB0000028806

May 08, 2001

Delivery: 80096428
Del. Created By: Craig Dodson
Route: 000033

Requested Date: May 11, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: US87
AVENTIS CROPSCIENCE USA LP
% WRIGHT DISTRIBUTION CENTER I
175 EXIT 122
1000 HANTHORN RD
LIMA OH 45804
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	109871	2,4-DCA (2,4-DICHLOROANILINE)1X100KG DRM	72	DRM		18720	LB
Order#: 710507		Order Taken By: Craig Dodson					

Picked by:

Total Shipping units:

Gross Weight 18720 LB
AB0000028806

To: +8705723795

From: AgrEvo

Fax:

TOPCALL

at: MAY-07-2001-11:12 Doc: 343 Page: 001

Page 1 of 1

May 07, 2001

Delivery: 80096083
Del. Created By: Holly West
Route: 000032

Requested Date: May 07, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: 21542
Aventis CropScience
c/o Steve Nutter
(919) 549-2069
1307 Person St
DURHAM NC 27703
USA

SHIP-FROM: USD7
Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000010	120511	CYCLANILIDE FDRM 1X80KG US (PRODUCED)	1	DRM		130	LB
Order#:		69758	Order Taken By:		Holly West		
Customer PO#:		DODSON/NUTTER					

Please ship from one of the following lot numbers:
7811015, #7811016 or #7811018.

Ship 5/8
Am Fritwys

OK
w

Picked by:

Total Shipping units:

Gross Weight 130 LB
AB0000028806

May 08, 2001

Delivery: 80096435
Del. Created By: Craig Dodson
Route: 000033

Requested Date: May 14, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: US82
AVENTIS CROPSOURCE USA LP
133 E KRAUSS
ST LOUIS MO 63111
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED)	3	DRM	_____	390	LB
Order#: 710511		Order Taken By: Craig Dodson					

Please choose 1 drum from either lot 7811006 or 7811009. Please choose
1 drum from either lot 7811013 or 7811017. Please choose 1 drum from
either lot 7811021 or 7811022.

Picked by:

Total Shipping units:

Gross Weight 390 LB
AB0000028806



12:00

KRAUSE-TULLER, SUIT 7 918/6572373

NJ, 027

001

STRAIGHT BILL OF LADING - SHORT FORM

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in conformity with order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Bill of Lading as set forth in the appropriate bill of lading classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
133 E KRAUSS
ST LOUIS MO 63111
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

BL NO.

80096435

Page: 1 of 1

Date: May 08, 2001

CARRIER: AMERICAN FREIGHT

VEHICLE NO.:

FREIGHT CHARGES: Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS. _____

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send to

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO.	DESCRIPTION	CLASS	ID	P.G.	WEIGHT
3 Drums	120511	CHEMICALS, N.O.I. CYCLANILIDE FORM 1X50KG US (PRODUCED) Please choose 1 drum from either lot 7811006 or 7811009. Please choose 1 drum from either lot 7811013 or 7811017. Please choose 1 drum from either lot 7811021 or 7811022. <i>Batch NO 7811022 7811013 7811009</i>				390 LB

Other signature acknowledges receipt of freight only
Terms & Conditions of ARPH Rules Tare 120 apply

01452455-9



FCY

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED?

☐ YES☐ NO-FURNISHED BY CARRIER

HAZARD SUPPLIED?

☐ YES☐ NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE _____

TOTAL
WEIGHT

390 LB

Aventis
P.O. Box 12914
62 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

Q AMOUNT
Q FEE
Q TOTAL

Date: *5/08/01 P4174*Carrier: *6016/BLU (1)*Date: *5-9-01*Consignee: *Berni F...*Shipper: *Berni F...*

AB0000028841

STRAIGHT BILL OF LADING - SHORT FORM

Aventis

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in registered good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Customs Straight Bill of Lading as set forth in the appropriate rail or motor classification of use apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

BL NO.

80105389

Page: 1 of 1

Date: June 19, 2001

CARRIER: EMPIRE EXPRESS

VEHICLE NO.: 53402

FREIGHT CHARGES: Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

18688

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send to:

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	UNIT	DESCRIPTION	CLASS	ID	PC	HAZAR	WEIGHT
136	DRUMS	CHEMICALS, N.D.I. CYCLANILIDE FORM 1X50KG US (PRODUCED) Must be released lot numbers only. Must deliver on June 22nd. 7811024 43 DRUMS 7811018 37 DRUMS 7811012 20 DRUMS 7811030 30 DRUMS ---- 130 TOTAL					14,330 LBS. NET

This is to certify that the above-stated materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED

☐ YES ☐ NO-FURNISHED BY CARRIER
☐ YES ☐ NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE

TOTAL WEIGHT

16,900 LB

C AMOUNT
O FEE
D TOTAL

Aventis
P.O. Box 12014
82 E.W. Alexander Drive
Research Triangle Park, North Carolina 27709

Date:

6-21-01

Carrier:

Cedar Chemical

Date:

6-21-01

Consignee:

Berndtson

AB0000028841

STRAIGHT BILL OF LADING - SHORT FORM

Aventis

Received, subject to all terms and conditions of the contract in effect between shipper and carrier on the date of issue of this Bill of Lading, the property described herein in agreement good order, except as noted in the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Freight Bill of Lading as set forth in the appropriate rail or motor classification that apply.

COMMITTEE

CONSIGNOR (SHIPPER)

B/L NO.

AVENTIS CROPSOURCE USA LP
C/O NEW MARKS HOUSES
8021 FRONT AVE
BERKELEY MD 20134
USA

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

80105390
Page: 1 of 1
Date: June 19, 2001
CARRIER: EMPIRE EXPRESS
VEHICLE NO.: 53438
FREIGHT CHARGES: Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800 424 9300

SEAL NOS.

18691

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send to:

AVENTIS CROPSOURCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	DESCRIPTION	CLASS	TD	PG	MARK	WEIGHT
130 Drums	CHEMICALS, N.O.I. CYCLANILIDE FORM 1X50KG US (PRODUCED) Must be released lot numbers only. Must deliver on June 22nd. 7811025 44 DRUMS 7811036 1 DRUM 7811033 35 DRUMS 7811026 50 DRUMS ---- 130 TOTAL					14,330 LBS. NET

This is to certify that the above-named materials are properly classified, described, packaged, marked and loaded, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED?

☐ YES☐ NO-FURNISHED BY CARRIER

HAZARD SUPPLIED?

☐ YES☐ NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE

TOTAL WEIGHT

16,900 LB

Aventis
P.O. Box 12014
42 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

C AMOUNT
D FEE
D TOTAL

Date:

6-21-01

Date:

6-21-01

Carrier:

Jimmy D. Raine

Consignee:

Beverly Yonke

AB0000028841

Aventis

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in approved good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Freight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

ORIGIN:

AVENTIS CROPSOURCE USA LP
C/O NEW WAREHOUSES
1021 FIRST AVE
BERKELEY MD 21104
USA

CONSIGNEE (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

BL NO.

80105392

Page: 1 of 1

Date: June 19, 2001

CARRIER: EMPIRE EXPRESS

VEHICLE NO.: 53378

FREIGHT CHARGES: Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER:

1 800-434-8800

SEAL NOS.

18683

Carrier Attach memorandum copy of Bill of Lading to Freight Bill and send to

AVENTIS CROPSOURCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	UNIT OF MEASURE	DESCRIPTION	CLASS	ID	PG	HAIR	WEIGHT
1.30	DRUMS	CHEMICALS, N.D.I. CYCLANILIDE FORM 1X50KG US (PRODUCED) Must be released lot numbers only. Must deliver on June 24th. 780006 14 Drums 7811015 24 Drums 7811021 40 Drums 7811026 16 Drums 7812027 36 Drums 7811015 - 25 Drs. 7811034 - 59 Drs. 7811035 - 46 Drs.					14,330 LBS. NE

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS SUPPLIED?

☐ YES ☐ NO-FURNISHED BY CARRIER
HAZARD SUPPLIED?

☐ YES ☐ NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE

TOTAL WEIGHT

16,900 LI

PLACARDS REQUIRED:

PREPAID VALUE OF SHIPMENT

Address

P.O. Box 12014
62 E.W. Alexander Drive
Research Triangle Park, North Carolina 27709

AMOUNT

☐ FEE
☐ TOTAL

Date: 6-25-01

Date: 6-25-01

Signature: *Jimmy D. Raines*

Signature: *Bernie Ford*

AB0000028841



STRAIGHT BILL OF LADING - SHORT FORM

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described herein to represent goods order, except as noted, in the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate bill of lading classification shall apply.

CONSIGNEE:	CONSIGNOR (SHIPPER):	BL NO.
AVENTIS CROPSCIENCE USA LP	Aventis CropScience USA LLP	80105393
C/O NSY WAREHOUSES	c/o Cedar Chemical Corporation	Page:1 of 1
8921 FROST AVE	49 Phillipe Road #311	Date: June 19, 2001
BERKELEY MO 63134	Helena AR 72342	CARRIER: EMPIRE EXPRESS
USA	USA	VEHICLE NO. 53524
		FREIGHT CHARGES: Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send to:

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

STREET ADDRESS BY TELEPHONE NUMBER:
1-800-424-9300

SEAL NOS.
18687

QUANTITY	UNIT	DESCRIPTION	CLASS	HT	PC	HAIRG	WEIGHT
130	Drums	CHEMICALS, N.O.I. CYCLANILIDE FDRM 1X50KG US (PRODUCED) Must be released lot numbers only. Must deliver on June 28th. 7811023 31 DRUMS 7811042 40 DRUMS 7811055 59 DRUMS ----- 130 Total					16,900 LB 14,300 NET
							10496 = 130

We hereby certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED?

☐ YES ☐ NO-FURNISHED BY CARRIER

HAIRG SUPPLIED?

☐ YES ☐ NO-FURNISHED BY CARRIER

OWNER'S SIGNATURE

TOTAL WEIGHT

16,900 LB

Aventis
P.O. Box 12594
62 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

C	AMOUNT
O	PER
D	TOTAL

Date: 6-27-01

Date: 6-27-01

AB0000028841

STRAIGHT BILL OF LADING - SHORT FORM



Received, subject to all terms and conditions of the contract in effect between Shipper and Carrier on the date of issue of this Bill of Lading, the property described herein in apparent good order, except as noted, in the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Freight Bill of Lading as set forth in the appropriate act or other classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MD 63134
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

B/L NO.

80105394

Page: 1 of 1

Date: July 18, 2001

CARRIER: EMPIRE EXPRESS

VEHICLE NO: 53428

FREIGHT CHARGES: Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

18651

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO	HM	DESCRIPTION	CLASS	ID	PG	VALUE	WEIGHT
130 Drums	120511		CHEMICALS, N.O.I. CYCLANILIDE FORM 1X50KG US (PRODUCED) Must be released lot numbers only. 7811011 25 7811022 22 7811046 40 7811039 32 7811038 11 ----- 130 TOTAL DRUMS					16,900 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF EQUIPMENT

PLACARDS REQUIRED

☐ YES ☐ NO-FURNISHED BY CARRIER
NAME OF EQUIPMENT
☐ YES ☐ NO-FURNISHED BY CARRIER

OWNER'S SIGNATURE

TOTAL WEIGHT

16,900 LB

Aventis
P.O. Box 12514
62 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

C AMOUNT
D PER
E TOTAL

Date: 7-18-01

Date: 7-18-01

Shipper: Benni Yonzu

Carrier: J. Raines

Consignee: Benni Yonzu

AB0000028841

STRAIGHT BILL OF LADING - SHORT FORM

Aventis

Received, subject to all terms and conditions of the contract in effect between shipper and carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted. In the event no notation is in effect, the terms and conditions of the Uniform Customs and Practice for Documentary Credits apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
C/O NSV WAREHOUSES
8821 FROST AVE
BERKELEY MD 63134
USA

CONSIGNEE (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

BL NO.

80109216

Page: 1 of 1

Date: July 18, 2001

CARRIER: EMPIRE EXPRESS

VEHICLE NO.: 53422

FREIGHT CHARGE: Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

18649

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO.	HM	DESCRIPTION	CLASS	CU	CG	HAIRS	WEIGHT
130 Drums	120511		CHEMICALS, N.O.I. CYCLANILIDE FDM 1X50KG US (PRODUCED)					16,900 LB
			Must be released lot numbers only.					
			7811045 28					
			7811007 11					
			7811040 34					
			7811009 5					
			7811044 5					
			7811038 35					
			7811053 12					
			----- 130 TOTAL DRUMS					

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PAID BY SHIPPER

☐ YES ☐ NO - FURNISHED BY CARRIER

☐ YES ☐ NO - FURNISHED BY CARRIER

DRIVER'S SIGNATURE

TOTAL WEIGHT

16,900 LB

Aventis
P.O. Box 12514
63 Tull Alexander Drive
Research Triangle Park, North Carolina 27709

C AMOUNT

O FEE

S TOTAL

Date: 7-18-01

Date: 7-18-01

SHIPPER

CARRIER

CONSIGNEE

AB0000028841



STRAIGHT BILL OF LADING - SHORT FORM

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted. In the event no notation is in effect, the Terms and Conditions of the Uniform Domestic Freight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
C/O NSV WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

BL NO.

80110040

Page: 1 of 1

Date: July 20, 2001

CARRIER:

EMPIRE EXPRESS

VEHICLE NO.:

53391

FREIGHT CHARGES:

Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

24 HOUR EMERGENCY TELEPHONE NUMBER:
1-800-424-9300

SEAL NOS.

18447

QUANTITY	DATE OF ISSUE	DESCRIPTION	CLASS	TO	PG	CARRI	WEIGHT
130 Drums	120511	CHEMICALS, N.O.I. CYCLANILIDE FORM 1X50KG US (PRODUCED) 7811030 3 7811040 6 7811031 5 7811023 15 7811008 16 7811050 44 7811043 41 7811041 3 7811038 1 7811048 3 ----- 130 TOTAL DRUMS					16,900 LB

This is to certify that the above-named contents are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS REQUIRED?

☐ YES☐ NO - FURNISHED BY CARRIER☐ YES☐ NO - FURNISHED BY CARRIER

DRIVER'S SIGNATURE

TOTAL
WEIGHT

16,900 LB

Aventis
P.O. Box 12514
62 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

G AMOUNT
O FEE
D TOTAL

Date: 7-23-01

Date: 7-23-01

Benni Jones

Benni Jones

Benni Jones

AB0000028841



STRAIGHT BILL OF LADING - SHORT FORM

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier at the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted, in the event no notation is in effect, the Terms and Conditions of the Uniform Customs and Practice for Documentary Credits shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MD 63134
USA

CONSIGNEE (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

B/L NO.

80110039

Page: 1 of 1

Date: July 20, 2001

CARRIER: EMPIRE EXPRESS

VEHICLE NO: 53459

FREIGHT CHARGES: Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight B/L and send

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

18650

QUANTITY	ASSEMBLY NO. (M)	DESCRIPTION	CLASS	ID	PG	DAERG	WEIGHT
130 Drums	120911	CHEMICALS, M.O.I. CYCLANILIDE FDM 1X50KG US (PRODUCED) 7811048 33 7811051 37 7811037 20 7811017 22 7811010 15 7811021 3 ----- 130 TOTAL DRUMS					16,900 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS REQUIRED:

☐ YES ☐ NO-FURNISHED BY CARRIER

☐ YES ☐ NO-FURNISHED BY CARRIER

SHIPPER'S SIGNATURE: _____

TOTAL
WEIGHT

16,900 LB

☐ AMOUNT
☐ PER
☐ TOTAL

Aventis
P.O. Box 12314
63 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

Date: 7-23-01

Date: 7-23-01

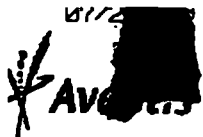
Shipper:

Bennett Jones

Carrier: J.D. Raines

Consignee: Bennett Jones

AB0000028841



10:28

PHONE-POULENC SUIT → 918/65723795

NU. 1225

1403

STRAIGHT BILL OF LADING - SHORT FORM

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described herein in apparent good order, except as noted, in the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rule or other classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
C/O NBY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

B/L NO.

80110038

Page: 1 of 1

Date: July 20, 2001

CARRIER:

EMPIRE EXPRESS

VEHICLE NO.:

S3 602

FREIGHT CHARGES:

Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER:
1-800-424-9300

SEAL NOS.

18627

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send to

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL ID	HAZ	DESCRIPTION	CLASS	IN	PO	WEIGHT
130 Drums	120511		CHEMICALS, N.O.I. CYCLANILIDE FDRM 1X50KG US (PRODUCED)				16,900 LB
			7811037 20 7811053 56 7811057 1 7811039 19 7811021 2 7811010 2 7811045 20 7811041 10 ----- 130 TOTAL DRUMS				

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS REQUIRED:

☐ YES☐ NO-FURNISHED BY CARRIER☐ YES☐ NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE

TOTAL
WEIGHT

16,900 LB

Aventis
P.O. Box 12014
62 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

C AMOUNT
O FEE
D TOTAL

Date: 7-25-01

Date: 7-25-01

Bennie Fong

A. D. Raines

Bennie Fong

AB0000028841

07/26/01

14:55

RHONE-POULENC SOIP → 918/2572575

NJ. 033

W01

STRAIGHT BILL OF LADING - SHORT FORM



Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted, in the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate act or state classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
C/O COASTLAND WAREHOUSE COMPANY
125 COLEMAN BLVD PORT AUTHORITY
SAVANNAH GA 31408
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

SEA NO.

80110886

Page: 1 of 1

Date: July 26, 2001

CARRIER: EMPIRE EXPRESS

VEHICLE NO.: 53425

FREIGHT CHARGES: Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

18682

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send 1

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO./ID	DESCRIPTION	CLASS	NO	NO	NO	WEIGHT
130 Drums	120511	CHEMICALS, N.O.I. CYCLANILIDE FDRM 1X50KG US (PRODUCED) Must be released lot numbers only. 7811060 53 7811032 40 7811058 32 7811061 5 ----- 130 TOTAL DRUMS					16,900 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED

☐ YES ☐ NO-FURNISHED BY CARRIER

☐ YES ☐ NO-FURNISHED BY CARRIER

OWNER'S SIGNATURE

TOTAL WEIGHT

16,900 LB

Aventis
P.O. Box 12014
69 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

O AMOUNT
O FEE
D TOTAL

Date:

7-31-01

Date:

7-31-01

Benjamin Fonda

Dannell Pugh

Benjamin Fonda

AB0000028841



STRAIGHT BILL OF LADING - SHORT FORM

Received, subject to all terms and conditions of the contract in effect between shipper and carrier on the date of issue of this Bill of Lading, the property described herein is accepted and order except as noted in the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Freight Bill of Lading as set forth in the appropriate act or local classification shall apply.

CONSIGNEE:

CONSIGNOR (SHIPPER):

B/L NO.

AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MD 63134
USA

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

80110887

Page:1 of 1

Date: July 26, 2001

CARRIER: EMPIRE EXPRESS

VEHICLE NO: 53339

FREIGHT CHARGES: Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER:

SEAL NOS.

1-800-424-9300

18659

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

Carrier Attach memorandum copy of Bill of Lading to Freight Bill and send to

QUANTITY	ORIGINAL NO	DESCRIPTION	CLASS	TD	PC	SAFETY	WEIGHT
130 Drums	120511	CHEMICALS, N.O.I. CYCLANILIDE FDM 1X50KG US (PRODUCED) Must be released lot numbers only. 7811063 6 7811064 79 7811061 42 7811060 2 ----- 130 TOTAL DRUMS					16,900 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARD REQUIREMENTS

☐ YES ☐ NO-FURNISHED BY CARRIER
☐ YES ☐ NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE

TOTAL WEIGHT

16,900 LB

Aventis
P.O. Box 12014
#2 T.M. Alexander Drive
Research Triangle Park, North Carolina 27709

C AMOUNT
D FEE
D TOTAL

Date:

7-31-01

Date:

2-30-01

Carrier:

J.D. Raines

Consignee:

Bennett

AB0000028841

STRAIGHT BILL OF LADING - SHORT FORM



Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Customs and Practice for Documentary Credits shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

CONSIGNEE (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

BL NO.

80110888

Page: 1 of 1

Date: July 26, 2001
CARRIER: EMPIRE EXPRESS
VEHICLE NO.: 53645
FREIGHT CHARGES: Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

18679

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO.	DESCRIPTION	CLASS	ID	PG	NRSG	WEIGHT
44 Drums	120511	CHEMICALS, N.O.I. CYCLANILIDE FDRM 1X50KG US (PRODUCED) Must be released lot numbers only. 7811063 - 44 DRUMS					5,720 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS REQUIRED:

☐ YES ☐ NO - FURNISHED BY CARRIER

☐ YES ☐ NO - FURNISHED BY CARRIER

SHIPPER'S SIGNATURE: _____

TOTAL WEIGHT

5,720 LB

Aventis
P.O. Box 12014
62 TW Alexander Drive
Research Triangle Park, North Carolina 27709

C AMOUNT
D FEE
G TOTAL

Date: 7-31-01

Date: 7-31-01

Signature: Benni Foster

Carrier: J.D. Raines

Consignee: Benni Foster

AB0000028841



12:14

MINUTEMAN SUIT 7 518760723700

12.0.01

VNC

STRAIGHT BILL OF LADING - SHORT FORM

Received, subject to all terms and conditions of the contract to which this bill of lading is attached, the quantity described below in apparent gross weight except as noted, in full and no protest is to effect, the Terms and Conditions of the Uniform Domestic Bill of Lading as set forth in the appropriate rule or rules promulgated thereon.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
% WRIGHT DISTRIBUTION CENTER INC
1-75 EXIT 122
1000 HANTHORN RD
LIMA OH 45804
USA

CONSIGNEE (SHIPPER):

Aventis CropScience USA LP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

B/L NO.

80098429

Page: 1 of 1

Date: 5/21/01

CARRIER: Transcarriers

VEHICLE NO.:

FREIGHT CHARGES: Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

18644

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and invoice

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SONKERVILLE NJ 08876-1259

QUANTITY	CATCHER NO.	NO.	DESCRIPTION	CLASS	NO.	NO.	NO.	WEIGHT
72 Drums	109671	X	DICHLORODANILINE, SOLID RD(2,4-DICHLORODANILINE) MARINE POLLUTANT INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON 2,4-DCA (2,4-DICHLORODANILINE) 1x200kg. net	6.1	UN1590	II	153	LBS. 43,000 42,840
NO: 6069								

This is to certify that the above-stated quantities are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED

☒ YES ☐ NO FURNISHED BY CARRIER

MARKS SUPPLIED

☒ YES ☐ NO FURNISHED BY CARRIER

DRIVER'S SIGNATURE

Date:

5-21-01

Carrier:

Transcarriers

TOTAL
WEIGHT

18,720 L

G AMOUNT
G FEE
G TOTAL

Date:

5-21-01

Consignee:

Benn Jones

AB0000028841



STRAIGHT BILL OF LADING - SHORT FORM

Receipt, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described herein is received and acknowledged as being, in the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Freight Bill of Lading as set forth in the appropriate rail or motor classification sheet upon

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
% WRIGHT DISTRIBUTION CENTER INC
1-75 EXIT 122
1000 HANTHORN RD
LIMA OH 45804
USA

CONSIGNEE (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

C.A. NO.:

80096428

Page: 1 of 1

Date: 5/21/01

CARRIER: Transcarriers

VEHICLE NO.:

FREIGHT CHARGES: Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08878-1259

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.:

QUANTITY	MATERIAL NUMBER	DESCRIPTION	CLASS	UNIT	NO.	WEIGHT	WEIGHT
		I DICHLORDANILINE, SOLID RD(2,4-DICHLORDANILINE) MARINE POLLUTANT	6.1	UN1890	II	153	
		INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON					
68 Drums	109671	2,4-DCA (2,4-DICHLORDANILINE) 1x200kg (net) 270 Kg					LBS.
		5122?					42,000 40,460 mr

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED:

☐ YES ☐ NO-FURNISHED BY CARRIER
☐ YES ☐ NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE

TOTAL
WEIGHT

18,720 LB

Aventis
P.O. Box 12014
98 T.M. Alexander Drive
Research Triangle Park, North Carolina 27709

Q AMOUNT
Q FEE
Q TOTAL

Date:

Date:

AB0000028841



STRAIGHT BILL OF LADING - SHORT FORM

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described herein in accordance with the bill of lading, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Customs and Practice for Documentary Credits apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
X WRIGHT DISTRIBUTION CENTER INC
1-75 EXIT 122
1000 HARTHORN RD
LIMA OH 45804
USA

CONSIGNEE (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

SA. NO.

80098430

Page: 1 of 1

Date: 5/22/01

CARRIER: Transcarriers

VEHICLE NO.:

FREIGHT CHARGES: Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER

1-800-424-9300

SEAL NOS.

18653

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and invoice

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MARKING NO. (INC)	DESCRIPTION	CLAS	TD	PG	NO. OF	WEIGHT
72 Drums	109671	X DICHLOROANILINE, SOLID RD(2,4-DICHLOROANILINE) MARINE POLLUTANT INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON 2,4-DCA (2,4-DICHLOROANILINE) 1x200kg. net	6.1	UN1990	II	153	LBS. 43,000 42,840
Truck No 754							

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport.

TOTAL SHIPPING UNITS**PLACARDS REQUIRED:****DECLARED VALUE OF SHIPMENT****PLACARDS SUPPLIED:**

☒ YES ☐ NO - FURNISHED BY CARRIER
Hazardous Materials
☐ YES ☒ NO - FURNISHED BY CARRIER

DRIVER'S SIGNATURE

TOTAL WEIGHT

18,720 LB

Aventis
P.O. Box 12014
68 T.M. Alexander Drive
Research Triangle Park, North Carolina 27709

Q AMOUNT
Q FEE
Q TOTAL

CUM

Date: 5-2-01

R

.4-2..

Packer

Aventis

Comptroller

Bennett

AD0000020041

STRAIGHT BILL OF LADING - SHORT FORM



Accepted, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in separate good order, except as noted, in the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rule or motor classification shall apply.

CONSIGNEE

CONSIGNOR (SHIPPER)

BL NO.

AVENTIS CROPSCIENCE USA LP
% WRIGHT DISTRIBUTION CENTER INC
1-75 EXIT 122
1000 HANTHORN RD
LIMA OH 45804
USA

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

80096431

Page: 1 of 1

Date: May 09, 2001

CARRIER: AMERICAN FREIGHT

VEHICLE NO.:

FREIGHT CHARGES: Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS. _____

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO. (HM)	DESCRIPTION	CLASS	ID	P.G.	NAEPD	WEIGHT
23 Drums	109671	X DICHLOROANILINE, SOLID RD (2,4-DICHLOROANILINE) MARINE POLLUTANT INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON 2,4-DCA (2,4-DICHLOROANILINE). 1x200kg net	6.1	UN1590	II	153	10,141 LBS.

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED:

☐ YES☐ NO-FURNISHED BY CARRIER

NAEPD SUPPLIED:

☐ YES☐ NO-FURNISHED BY CARRIER

ORIGIN'S SIGNATURE _____

TOTAL
WEIGHT

5,980 LB

Aventis
P.O. Box 12014
62 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

C AMOUNT
O FEE
O TOTAL

Date: _____

Date: _____

Shipper: _____

Carrier: _____

Consignee: _____

AB0000028781

CEDAR CHEMICAL CORPORATION

49 PHILLIPS 311

HELENA, AR 72390

(870)572-3701 FAX(870)572-3795

FACSIMILE TRANSMITTAL SHEET

TO: CRAIG

FROM: LISA

COMPANY: AVENTIS

DATE: September 17, 2001

FAX NUMBER: 919-549-2200

TOTAL NO. OF PAGES INCLUDING COVER: 3

AB0000028781

06/28/01

14:54

KLINE-MULLEN P.O. BOX 12014

STRAIGHT BILL OF LADING - SHORT FORM



Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in separate good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rate or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

B/L NO.

80107047

Page: 1 of 1

Date: June 28, 2001
CARRIER: EMPIRE EXPRESS

VEHICLE NO.:

FREIGHT CHARGES:

Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS. 20096

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send to

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO.	HAZ	DESCRIPTION	CLASS	ID	PG	HAERG	WEIGHT
130 Drums	120511		CHEMICALS, N.O.I. CYCLANILIDE FDRM 1X50KG US (PRODUCED) Must be released lot numbers only. 7811055 10 7811056 44 7811042 1 7811054 64 7811057 10 7811038 1 ----- 130 TOTAL DRUMS					16,900 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED:

☐ YES ☐ NO-FURNISHED BY CARRIER
☐ YES ☐ NO-FURNISHED BY CARRIER

SHIPPER'S SIGNATURE

TOTAL WEIGHT

16,900 LB

Aventis
P.O. Box 12014
#2 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

C AMOUNT
O FEE
D TOTAL

Date: _____

Date: 6-29-01

SHIPPER:

B. Enni Forster

Carrier:

Consignee:

B. Enni Forster

AB0000028781



07/20/01

10:20

KINETIC-TOULON SUIT 9 918/05/23/00

NU.026

D04

STRAIGHT BILL OF LADING - SHORT FORM

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described herein in apparent good order, except as noted, in the event no contract is in effect, the Terms and Conditions of the Uniform Customs and Practice for Documentary Credits apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

BA NO.

80110037

Page:1 of 1

Date: July 20, 2001

CARRIER: EMPIRE EXPRESS

VEHICLE NO: 53413

FREIGHT CHARGES: Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

18670

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO.	HM	DESCRIPTION	CLASS	ID	P.G.	HAERC	WEIGHT
130 Drums	120511		CHEMICALS, N.O.I. CYCLANILIDE FDM 1X50KG US (PRODUCED)					16,900 LB
			7811032 51 7811047 15 7811049 20 7811017 5 7811052 2 7811041 33 7811040 2 7811039 1 7811050 1 ----- 130 TOTAL					

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS REQUIRED:

☐ YES ☐ NO-FURNISHED BY CARRIER
☐ YES ☐ NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE

TOTAL
WEIGHT

16,900 LB

Aventis
P.O. Box 12014
92 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

C AMOUNT
O FEE
D TOTAL

Date:

7-26-01

Date:

Benji Yonj 7-26

Shipper:

Benji Yonj

Carrier:

Consignee:

Benji Yonj

AB0000028781

**CYCLANILIDE PRODUCTION
2001**

Batch#	#drums produced	# drums shipped	Difference
780008	13	13	0
7811007	12	11	1
7811008	16	16	0
7811009	6	6	0
7811010			
7811010	17	17	0
7811011	25	25	0
7811012	20	20	0
7811013	21	1	20
7811014	34	34	0
7811015			
7811015	49	49	0
7811016			
7811016	26	26	0
7811017			0
7811017	28	27	1
7811018	37	37	0
7811020	32	32	0
7811021			0
7811021			0
7811021	45	45	0
7811022			0
7811022	24	22	2
7811023			0
7811023	43	45	-2
7811024	43	43	0
7811025	44	44	0
7811026			0
7811026	66	66	0
7811027	65	65	0
7811028	59	59	0
7811029			0
7811029	34	38	-4
7811030			0
7811030	43	33	10
7811031	46	5	41
7811032		40	-40
7811033			0
7811033	40	40	0
7811034	59	59	0
7811035	45	46	-1
7811036	38	1	37
7811037			0
7811037	39	41	-2
7811038			0
7811038			0

AB0000028781

7811038			0
7811038	47	47	0
7811039			0
7811039			0
7811039	52	52	0
7811040			0
7811040			0
7811040	42	42	0
7811041			0
7811041			0
7811041	46	46	0
7811042			0
7811042	41	41	0
7811043	34	34	0
7811044	66	5	61
7811045			0
7811045	48	53	-5
7811046	40	40	0
7811047	15	15	0
7811048			0
7811048	36	36	0
7811049	20	20	0
7811050			0
7811050	45	45	0
7811051	34	37	-3
7811052	58	2	56
7811053			0
7811053	68	68	0
7811054	64	64	0
7811055			0
7811055	69	69	0
7811056	44	44	0
7811057			0
7811057	45	11	34
7812027	36	36	0
7811032	29	51	-22
7811058	32	32	0
7811060	59	55	4
7811061	52	50	2
7811063	49	49	0
7811064	78	78	0
7801102rw	-34		-34
7811013rw	-21		-21
7811019rw	-38		-38
7811052rw	-58		-58
7801108rw	-13		-13
Totals	2154	2128	26

	lbs	kgs		lbs	kgs	
2154 drums=	236,940.00	107,475.28	2128drums=	234,080.00	106,177.99	1,297.29

To: +8705723795

From: AgrEvo

Fax:

TOPCALL at: JUL-20-2001-11:18 Doc: 253 Page: 001
Page 1 of 1

July 20, 2001

Delivery: 80110037
Del. Created By: Craig Dodson
Route: 000033

Requested Date: July 24, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 712001

Order Taken By: Craig Dodson

Picked by:

Total Shipping units:

Gross Weight 16900 LB
AB0000028781

July 20, 2001

Delivery: 80110038
Del. Created By: Craig Dodson
Route: 000033

Requested Date: July 25, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 712002

Order Taken By: Craig Dodson

Picked by:

Total Shipping units:

Gross Weight 16900 LB

AB0000028781

July 20, 2001

Delivery: 80110039
Del. Created By: Craig Dodson
Route: 000033

Requested Date: July 26, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM	_____	16900	LB

Order#: 712003

Order Taken By: Craig Dodson

Picked by:

Total Shipping units:

Gross Weight 16900 LB
AB0000028781

July 20, 2001

Delivery: 80110040
Del. Created By: Craig Dodson
Route: 000033

Requested Date: July 27, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM	_____	16900	LB

Order#: 712004

Order Taken By: Craig Dodson

Picked by:

Total Shipping units:

Gross Weight 16900 LB
AB0000028781



STANDARD BILL OF LADING - SHORT FORM

Read and, subject to all terms and conditions of the contract in effect between shipper and carrier on the date of issue of this Bill of Lading, the property described below is received from shipper, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Commercial Code Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE

AVENTIS CROPSCIENCE USA LP
133 E KRAUSS
ST LOUIS MO 63111
USA

CONSIGNOR (SHIPPER)

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillipe Road #311
Helena AR 72342
USA

B/L NO.

80104460

Page: 1 of 1

Date: June 14, 2001

CARRIER: EMPIRE EXPRESS

VEHICLE NO.: 53498

FREIGHT CHARGES: Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

18662

Comment: Attach memorandum copy of Bill of Lading to Freight Bill and send to

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO.	DESCRIPTION	CLASS	ID	P.C.	NAERG	WEIGHT
130 Drums	120511	CHEMICALS, N.O.I. CYCLANILIDE FDRM 1X50KG US (PRODUCED) Must be released lot numbers. 7811014 34 DRUMS 7811016 1 DRUM 7811020 32 DRUMS 7811028 59 DRUMS 7811029 4 DRUMS ---- 130 TOTAL					14,330 LBS. NET
Seal 18662							

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED:

☐ YES☐ NO-FURNISHED BY CARRIER
NAERG SUPPLIED☐ YES☐ NO-FURNISHED BY CARRIER

SHIPPER'S SIGNATURE

TOTAL WEIGHT

14,900 LB

C AMOUNT

O FEE

O TOTAL

Aventis

P.O. Box 12014

43 T.W. Alexander Drive

Research Triangle Park, North Carolina 27709

Date:

6-15-01

Date:

6-15-01

Shipper:

Bernie Fonz

Carrier:

Marty Bush

Consignee:

Bernie Fonz

AB0000028781



STRAIGHT BILL OF LADING - SHORT FORM

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
133 E KRAUSS
ST LOUIS MO 63111
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

SA NO.

80104459

Page: 1 of 1

Date: June 14, 2001

CARRIER:

EMPIRE EXPRESS

VEHICLE NO.:

53397

FREIGHT CHARGES:

Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

24 HOUR EMERGENCY TELEPHONE NUMBER:
1-800-424-9300

SEAL NOS. 18678

QUANTITY	MATERIAL NO.	HM	DESCRIPTION	CLASS	ID	P.O.	HAERS	WEIGHT
130 Drums	120511		CHEMICALS, N.O.I. CYCLANILIDE FORM 1X50KG US (PRODUCED) Must be released lot numbers. 7811016 25 DRUMS 7811027 65 DRUMS 7811029 35 DRUMS 7811033 5 DRUMS ----- 130 TOTAL					14,330 LBS. NET
Sent 18678								

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport.

TOTAL SHIPPING UNITS

PLACARDS SUPPLIED:

☐ YES ☐ NO-FURNISHED BY CARRIER
HAERS SUPPLIED?
☐ YES ☐ NO-FURNISHED BY CARRIER

TOTAL
WEIGHT

18,900 LB

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

Aventis
P.O. Box 12014
22 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

G AMOUNT
O FEE
D TOTAL

Date: 6-15-01

Date: 6-15-01

Shipper:

Benni Yonze

Carrier:

Jimmy Davis

Consignee:

Benni Yonze

AB0000028781

06/19/01

16:33

PHONE-POULENC SUPP → 918/85723750

NU. 0004

WAS

STRAIGHT BILL OF LADING - SHORT FORM



Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, current as noted in the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
C/O NEX WAREHOUSES
1021 FRONT AVE
BERKELEY MO 63104
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillipe Road #311
Helena AR 72342
USA

BL NO.

80105394

Page: 1 of 1

Date: June 19, 2001

CARRIER: EMPIRE EXPRESS

VEHICLE NO.:

FREIGHT CHARGES: Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER:

1 800 424 2100

SEAL NOS. _____

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send to

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO.	DESCRIPTION	CLASS	ID	P.G.	HAERG	WEIGHT
130 130 units	1-00511	CHEMICALS, N.O.I. CYCLOANILIDE FORM 1X50KG US (PRODUCED) Must be released lot numbers only. Must deliver on June 28th.					16,900 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

HAERG VALUED FOR SHIPMENT

PLACARDS SUPPLIED?

☐ YES☐ NO-FURNISHED BY CARRIER

HAERG SUPPLIED?

☐ YES☐ NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE _____

TOTAL
WEIGHT

16,900 LB

Aventis
P.O. Box 12014
#2 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

C AMOUNT
D FEE
D TOTAL

Date: _____

Date: _____

Carrier: _____

Consignee: _____

AB0000028781

STRAIGHT BILL OF LADING - SHORT FORM

Aventis

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
C/O NSV WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

B/L NO.

80105393

Page: 1 of 1

Date: June 19, 2001

CARRIER: EMPIRE EXPRESS

VEHICLE NO.:

FREIGHT CHARGES: Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send to:

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

TELEPHONE NUMBER:
1-800-424-9300

SEAL NOS.

QUANTITY	DATE	DESCRIPTION	CLASS	ID	P.G.	HAERG	WEIGHT
130 bags	120311	CHEMICALS, N.O.I. CYCLANILIDE FORM 1X50KG US (PRODUCED) Must be released lot numbers only. Must deliver on June 28th.					16,900 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED?

☐ YES☐ NO-FURNISHED BY CARRIER

HAERG SUPPLIED?

☐ YES☐ NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE

TOTAL
WEIGHT

16,900 LB

Aventis
P.O. Box 12014
92 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

C AMOUNT
O FEE
D TOTAL

Date:

Date:

AB0000028781



12:14

KLINE-TULLER SUPPLY 7 318/63/23/30

NO. 001

1004

STRAIGHT BILL OF LADING - SHORT FORM

Received subject to all terms and conditions of the contract in effect between shipper and carrier on the date of issue of the bill of lading, the provisions described below in separate good order, except as noted, in the event no contract is in effect, the terms and conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
% WRIGHT DISTRIBUTION CENTER INC
1-75 EXIT 122
1000 HANTHORN RD
LIMA OH 45804
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

BL NO.

80096431

Page: 1 of 1

Date: May 09, 2001
CARRIER: AMERICAN FREIGHT

VEHICLE NO.:

FREIGHT CHARGE:

Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.:

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO.	DESCRIPTION	CLASS	IN	PG	WEIGHT
23 Drums	109671	X DICHLOROANILINE, SOLID RD(2,4-DICHLOROANILINE) MARINE POLLUTANT INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON 2,4-DCA (2,4-DICHLOROANILINE). 1x200kg net	4.1	UN1590	II	133
						10,141 LBS. 23 Drums

Driver Signature acknowledges receipt of goods only
Terms & Conditions of ASPW Rules Part 125 apply

01447101-7



ARRIVE

0925

DEPART

1015

REFREIGHT

FCY

P5264

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport.

TOTAL SHIPPED UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS REQUIRED:

☐ YES☐ NO-FURNISHED BY CARRIER☐ YES☐ NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE

TOTAL WEIGHT

9,980 LB

0 AMOUNT
0 FTS
0 TOTAL

Aventis
P.O. Box 12014
62 E.W. Alexander Drive
Research Triangle Park, North Carolina 27709

Date:

5-11-01
HFC/Pls. show 11/23/01
Carrier: On 11/23/01 05-11-01

Date:

5-11-01

Consignee:

Bennett
AB00000028857



November 7, 2000

Re: Goods Receipt for Purchase Orders: Initial Screen

Attached is a revision for entering data in the **Bill of Lading** field of the referenced screen of SAP. The three fields Delivery Note, Bill of Lading, and Header Text creates freight payment authorizations for materials purchased on freight collect basis.

The revision reflects the length limitation of the bill of lading field entry. Although the field is big enough for 16 characters, *a bill of lading number of only ten or fewer characters is recognized by SAP.*

Please follow these instructions so that problems with freight bill payment for purchased materials can be held to a minimum. We have had major problems with some carriers threatening to place us on a cash basis.

Please call with questions.

Sincerely,

Glenn
Glenn E. Cannon
Transportation Department

AB0000028857

To: All Aventis CropScience personnel, warehouses and formulators / tollers who will be creating "Goods Receipt for Purchase Orders" in SAP

There are three fields in the Goods Receipt for Purchase Order: Initial Screen (copy attached) which have been designated for use to input important data to create freight payment authorizations for materials purchased on a freight collect basis.

These three fields are:

- 1) Delivery note
- 2) Bill of lading
- 3) Header text

Delivery note In this field enter the vehicle ID number (trailer number, rail car number or ocean container number) if known. If the vehicle ID number is not known enter "Not Known".

Bill of lading In this field enter one of the following (listed in order of preference):

- 1) Carrier pro number, freight bill number, waybill number or air bill number
- 2) Shipper's bill of lading number
- 3) Ship Month + Ship Day + Vehicle Number in the following format:

MMDD + Vehicle number

MM = is the two digit numeric ship month

DD = is the two digit ship day

Vehicle number = is the trailer number, rail car number or ocean container number

For a trailer – enter the complete trailer number

For a rail car or ocean container – enter the 1st alpha character + the numeric characters.

Example: Rail car RAIX32459 shipped April 3, 2000

Enter: 0403R32459

Note: If the entry in the bill of lading field exceeds 10 characters, drop sufficient characters from the end of the number to reduce the total length of the entry to 10 characters.

Enter the number without spaces, dashes or slashes. Do not add extra characters such as JB, Pro#, etc.

Header text: In this field enter the five digit origin postal zip code.

Section II.

Processing Steps

STEP #	Description	Comments
1	<p>Menu Path - <i>Logistics → Materials Management → Inventory Management.</i></p> <p>Click on "For purchase order" button.</p> <p>Screen Name - Goods Receipt for Purchase Order: Initial Screen</p> <p>Enter the fields on the screen as follows:</p>	Transaction: MB01

Goods receipt Edit Goto Movement type Environment System Help

Document date	03/01/2000	Posting date	03/01/2000
Delivery note		Bill of lading	
Header text		GR/GI slip no.	

Defaults for document items

Movement type	01		
Purchase order			
Plant			
Storage location			

GA/GI slip

Print

Individual slip

- Indiv. slip w inspect text

Collective slip

Mandatory Fields

LWalker

From: <Craig.Dodson@aventis.com>
To: <lwalker@cvrtmail.com>
Cc: <jmancini@cvrtmail.com>
Sent: Friday, July 27, 2001 5:48 AM
Subject: RE: Total Cyclanilide Production
 Lisa,

This is a little different than we discussed. Can you give me a call?

1. First production into SAP was for 60,850 kg (or 1,217 drums) in March.
2. Latest production into SAP was for 52,050 kg (or 1,041 drums) this month.

Thanks,
 Craig

-----Original Message-----

From: Cedar Chemical Corporation
[mailto:jmancini@cvrtmail.com]
Sent: Thursday, July 26, 2001 4:44 PM
To: Dodson, Craig
Cc: 'jrone@cvrtmail.com'; 'lwalker@cvrtmail.com'
Subject: Total Cyclanilide Production

Craig:

The official total amounted to 105,978 kgs and this is the amount that you will be invoiced for. The first invoice was for 60,873 kgs; the second one will be for 45,105 kgs.

Please let me know if you have any questions.

Joe M.

1820
 304

 2124

112900157

1217
 1041

 2258

2258
 2124

 134

67K9S
 12
 4

<i>Date</i>	<i>B/L#</i>	<i>Ship to</i>	<i>Shipper</i>	<i>Product</i>	<i>Cont#</i>	<i>Qty</i>	<i>Misc</i>
5/8/2001	4-21331	Aventis	American Freightway	Cyclanilide	P14810	110	Lot#7811018-1dr@110lbs
5/9/2001	80096435	Aventis	American Freightway	Cyclanilide		330	Lot#009,013 & 022 3@110lbs
5/11/2001	80096431	Aventis	American Freightway	2, 4 DCA		10,141	23drums@441lbs ea
5/21/2001	80096430	Aventis	Trans Carriers	2,4 DCA	758	42,840	72drums@270kgs-per drum
5/21/2001	80096429	Aventis	Trans Carriers	2,4 DCA	8068	42,840	72drums@270kgs-per drum
5/22/2001	80096428	Aventis	Trans Carriers	2,4 DCA	18658	40,480	68drums@270kgs
6/16/2001	80104459	Aventis	Empire Express	Cyclanilide	53397	14,330	130drs@110lbs ea
6/15/2001	80104460	Aventis	Empire Express	Cyclanilide	53498	14,330	130drs@110lbs ea
6/21/2001	80105390	Aventis	Empire Express	Cyclanilide	53430	14,300	130dr@110lbs
6/21/2001	80105389	Aventis	Empire Express	Cyclanilide	53402	14,300	130dr@110lbs
6/25/2001	80105392	Aventis	Empire Express	Cyclanilide	53407	14,330	130@110lbs ea
6/25/2001	80105391	Aventis	Empire Express	Cyclanilide	53338	14,330	130@110lbs ea
6/27/2001	80105393	Aventis	Empire Express	Cyclanilide	53576	14,300	130drs@110lbs ea
6/29/2001	80107047	Aventis	Empire Express	Cyclanilide		14,300	130drs@110lbs ea
7/18/2001	80105394	Aventis	Empire Express	Cyclanilide	18651	14,300	130drs@110lbs ea
7/18/2001	80109216	Aventis	Empire Express	Cyclanilide	18649	14,300	130drs@110lbs ea
7/23/2001	80110039	Aventis	Empire Express	Cyclanilide	53459	14,300	130drs@110lbs ea
7/23/2001	80110040	Aventis	Empire Express	Cyclanilide	53391	14,300	130drs@110lbs ea
7/25/2001	80110038	Aventis	Empire Express	Cyclanilide	53862	14,300	130drs@110lbs ea

Total: 978,081

200,640 LBS

have 304 drums-

185,400

200,200

Thursday, July 26, 2001

Page 2 of 2

2124 Drums

233,640

AB0000028857

LWalker

From: <Craig.Dodson@aventis.com>
To: <lwalker@cvrtmail.com>
Sent: Monday, July 23, 2001 12:05 PM
Subject: Total Cyclanilide production
Lisa,

Need some help. Current production reported into SAP is 2048 drums or 102400 kgs. I was just copied on an e-mail from Joe Mancini that states the total run will be 108640 kgs. Can you confirm that? I would need to produce another 124.8 drums in SAP.

Thanks,
Craig

^{Aventis}
 $2048 \times 110 = 225280$

233,640

76 Drums

105,978 kgs

(94)

60873 invoice

July 26, 2001

Delivery: 80110886
Del. Created By: Craig Dodson
Route: 000032

Requested Date: August 01, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USC1
AVENTIS CROPSCIENCE USA LP
C/O COASTLAND WAREHOUSE COMPAN
126 COLEMAN BLVD PORT AUTHORIT
SAVANNAH GA 31408
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 712147

Order Taken By: Craig Dodson

Picked by:

Total Shipping units:

Gross Weight 16900 LB
AB0000028857

July 26, 2001

Delivery: 80110887
Del. Created By: Craig Dodson
Route: 000033

Requested Date: August 01, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 712148

Order Taken By: Craig Dodson

Picked by:

Total Shipping units:

Gross Weight 16900 LB
AB0000028857

July 26, 2001

Delivery: 80110888
Del. Created By: Craig Dodson
Route: 000033

Requested Date: August 02, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	44	DRM		5720	LB

Order#: 712149

Order Taken By: Craig Dodson

Picked by:

Total Shipping units:

Gross Weight 5720 LB
AB0000028857

July 16, 2001

Delivery: 80109215
Del. Created By: Craig Dodson
Route: 000033

Requested Date: July 17, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: US82
AVENTIS CROPSCIENCE USA LP
133 E KRAUSS
ST LOUIS MO 63111
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 711906

Order Taken By: Craig Dodson

Must be released lot numbers only. To deliver on Tuesday, July 17th.

Picked by:

Total Shipping units:

Gross Weight 16900 LB
AB0000028857

To: +8705723795

From: AgrEvo

Fax:

TOP CALL at: JUL-16-2001-12:56 Doc: 449 Page: 001
Page 1 of 1

July 16, 2001

Delivery: 80109216
Del. Created By: Craig Dodson
Route: 000033

Requested Date: July 18, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 711907

Order Taken By: Craig Dodson

Must be released lot numbers only.

Picked by:

Total Shipping units:

Gross Weight 16900 LB
AB0000028857

June 28, 2001

Delivery: 80107047
Del. Created By: Craig Dodson
Route: 000033

Requested Date: July 02, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: US89
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 711596

Order Taken By: Craig Dodson

Must be released lot numbers only.

Picked by:

Total Shipping units:

Gross Weight 16900 LB
AB0000028857

June 19, 2001

Delivery: 80105393
Del. Created By: Craig Dodson
Route: 000033

Requested Date: June 28, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 711434

Order Taken By: Craig Dodson

Must be released lot numbers only. Must deliver on June 28th.

Picked by:

Total Shipping units:

Gross Weight 16900 LB
AB0000028857

To: +8705723795

From: AgrEvo

Fax:

TOPCALL at: JUN-19-2001-17:13 Doc: 527 Page: 001
Page 1 of 1

June 19, 2001

Delivery: 80105394
Del. Created By: Craig Dodson
Route: 000033

Requested Date: June 28, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 711435

Order Taken By: Craig Dodson

Must be released lot numbers only. Must deliver on June 28th.

Picked by:

Total Shipping units:

Gross Weight 16900 LB
AB0000028857

To: +8705723795

From: AgrEvo

Fax:

TOPCALL at: JUN-19-2001-17:12 Doc: 525 Page: 001
Page 1 of 1

June 19, 2001

Delivery: 80105389
Del. Created By: Craig Dodson
Route: 000033

Requested Date: June 22, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 711430

Order Taken By: Craig Dodson

Must be released lot numbers only. Must deliver on June 22nd.

Picked by:

Total Shipping units:

Gross Weight 16900 LB
AB0000028857

June 19, 2001

Delivery: 80105390
Del. Created By: Craig Dodson
Route: 000033

Requested Date: June 22, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FORM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 711431

Order Taken By: Craig Dodson

Must be released lot numbers only. Must deliver on June 22nd.

Picked by:

Total Shipping units:

Gross Weight 16900 LB

AB0000028857

June 19, 2001

Delivery: 80105392
Del. Created By: Craig Dodson
Route: 000033

Requested Date: June 26, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 711433

Order Taken By: Craig Dodson

Must be released lot numbers only. Must deliver on June 26th.

Picked by:

Total Shipping units:

Gross Weight 16900 LB

AB0000028857

June 19, 2001

Delivery: 80105391
Del. Created By: Craig Dodson
Route: 000033

Requested Date: June 26, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: USB9
AVENTIS CROPSCIENCE USA LP
C/O NSY WAREHOUSES
8921 FROST AVE
BERKELEY MO 63134
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 711432

Order Taken By: Craig Dodson

Must be released lot numbers only. Must deliver on June 26th.

Picked by:

Total Shipping units:

Gross Weight 16900 LB
AB0000028857



delivering new solutions

round 1

$$\begin{array}{r} 29 = 7 - 35 \\ 27 = 13 \quad 65 \\ 16 = 5 \quad 25 \\ 33 = 1 \quad 5 \\ \hline 26 \quad 130 \end{array}$$

$$\begin{array}{r} 20 - 6 \\ 14 - 6 \\ 28 = 11 \\ 20/14 = 1 \quad 2/3 \\ 14/28 = 1 \quad 1/4 \\ 29/16 = 1 \quad 4/1 \\ \hline 26 \end{array}$$

$$\begin{array}{r} 20 - 32 \\ 14 - 34 \\ 28 - 59 \\ 29 - 4 \\ 16 - 1 \\ \hline 130 \end{array}$$

800-235-5569

www.odfl.com

0

7811020 =

⁶
~~32~~ 32 =

7811014 =

34 ⁶ 4 } 2

7811028 =

59 11 4 }

7811029 =

39 ⁷

781016 =

26 ⁵

781027 =

~~45~~ ¹³ 45

7811033 =

~~5~~ ¹ 5

Batch Pallets

20 - 6
14 - 6
28 - 11
29 - 7

16 - 5
27 - 13
33 - 51

260

Batch

20/14 2/3 = 1
14/28 1/4 = 1
29/16 4/1 = 1

26 pallets

26
54
278

June 14, 2001

Delivery: 80104459
Del. Created By: Craig Dodson
Route: 000033

Requested Date: June 18, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: US82
AVENTIS CROPSCIENCE USA LP
133 E KRAUSS
ST LOUIS MO 63111
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120811	CYCLANILIDE FORM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 711333

Order Taken By: Craig Dodson

Must be released lot numbers.

7811016	25 DRUMS	14,330 LBS. NET
7811027	65 DRUMS	
7811029	35 DRUMS	
7811033	5 DRUMS	

130 TOTAL		

Picked by:

Total Shipping units:

Gross Weight 16900 LB
AB0000028857

June 14, 2001

Delivery: 80104460
Del. Created By: Craig Dodson
Route: 000033

Requested Date: June 18, 2001
Carrier: ROUTING GUIDE
Freight Charges: Prepaid

SHIP-TO: US82
AVENTIS CROPSCIENCE USA LP
133 E KRAUSS
ST LOUIS MO 63111
USA

SHIP-FROM: USD7
Aventis CropScience
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

Item	Material	Description	Quantity	UOM	Quantity picked	Weight	UOM
000001	120511	CYCLANILIDE FDRM 1X50KG US (PRODUCED) CHEMICALS, N.O.I.	130	DRM		16900	LB

Order#: 711334

Order Taken By: Craig Dodson

Must be released lot numbers.

7811014	34 DRUMS	14,330 LBS. NET
7811016	1 DRUM	
7811020	32 DRUMS	
7811028	59 DRUMS	
7811029	4 DRUMS	

130 TOTAL		

Picked by:

Total Shipping units:

Gross Weight 16900 LB
AB0000028857

LWalker

From: "Cedar Chemical Corporation" <jmancini@cvrtmail.com>
To: <lwalker@cvrtmail.com>; <bcummings@cvrtmail.com>
Sent: Monday, March 26, 2001 3:12 PM
Subject: FW: Needs for Cyclanillide
Lisa/Bobbi:

FYI. See below.

Joe M.

-----Original Message-----

From: Cedar Chemical Corporation [SMTP:jmancini@cvrtmail.com]
Sent: Monday, March 26, 2001 4:06 PM
To: 'krusling@cvrtmail.com'; 'mcgee@cvrtmail.com'; 'lrone@cvrtmail.com';
'nrobbins@cvrtmail.com'; 'gregs@cvrtmail.com'; 'rtomblin@cvrtmail.com'
Subject: FW: Needs for Cyclanillide

-----Original Message-----

From: Dan.Stahl@aventis.com [SMTP:Dan.Stahl@aventis.com]
Sent: Monday, March 26, 2001 3:02 PM
To: jmanini@CVRTMAIL.COM
Cc: Serge.Ravet@aventis.com; Craig.Dodson@aventis.com;
Dave.Linhardt@aventis.com; Larry.Spicer@aventis.com
Subject: FW: Needs for Cyclanillide

Joe-

To All:

See below.

Aventis has agreed to pay for the first 60 MT of Cyclanillide. Please ensure that we provide each requested item of paperwork. Please call me if you have any questions.

Joe M.

We are ready to proceed on the first 60MT order from you all. Here is what we need to get in place to finalize:

5/9/2001

AB0000028857

AB0000028857



12:14

KURE-YULENC SUIT 7 518/03123155

NO. 001

PAGE

STRAIGHT BILL OF LADING - SHORT FORM

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted, in the event no-carriage is in effect, the terms and conditions of the Uniform Customs and Practice for Documentary Credits shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
% WRIGHT DISTRIBUTION CENTER INC
1-75 EXIT 122
1000 HANTHORN RD
LIMA OH 45804
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

BL NO.

80098429

Page: 1 of 1

Date: May 09, 2001
CARRIER: ATG INC

VEHICLE NO.:

FREIGHT CHARGES: Prepaid

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send.

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS. _____

AVENTIS CROPSCIENCE C/O PTS
C/O PTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO	UNIT	DESCRIPTION	CLASS	TD	P.C.	NET WT	WEIGHT
72 Drums	109671	X	DICHLORDANILINE, SOLID RD(2,4-DICHLORDANILINE) MARINE POLLUTANT INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON 2,4-DCA (2,4-DICHLORDANILINE) 1x200kg. net	6.1	LN1590	11	153	31,746 LBS.

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport.

TOTAL SHIPPING UNITS

PLACARDS REQUIRED:

DECLARED VALUE OF SHIPMENT

PLACARDS SUPPLIED?

☐ YES☐ NO-FURNISHED BY CARRIER

HAZARD SUPPLIED?

☐ YES☐ NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE _____

TOTAL
WEIGHT

18,720 LB

Aventis
P.O. Box 12014
62 T.M. Alexander Drive
Research Triangle Park, North Carolina 27709

O AMOUNT
O FEE
O TOTAL

Date: _____

Date: _____

Shipper: _____

Carrier: _____

Consignee: _____

AB0000028857

- * Craig Dodson has listed below our needs in order to do the reconciliation, we need your help with these documents
- * The price agreed to is \$9.46/kg, the affluents issues will be handled when we do the overall reconciliation as we previously discussed
- * Larry Spicer is providing to Gregg Satterfield the details on our analytical results, all batches for this first 60MT must be in spec and we must have a certificate with each batch
- * This invoice and all future invoices should go to Dave Linhardt here at the RTP, NC Aventis address, I would appreciate a fax copy on the initial invoices as well

I think this wraps up all the issues. Please let me know of questions.
Thanks for your help!

Dan Stahl
Aventis Industrial Strategy
Phone: 919.549.2195
Fax: 919.549.2003
Mobile: 919.599.1525
E-mail: Dan.Stahl@aventis.com

> -----Original Message-----

> From: Dodson, Craig

> Sent: Monday, March 26, 2001 9:19 AM

> To: Stahl, Dan

> Cc: Linhardt, Dave

> Subject: Needs for Cyclanilide

>

> Dan,

>

> Here is what I need from Cedar and CreaNova to complete the
> reconciliation:

>

> 1. I need all receivers from the fall and spring campaign from Cedar.

> This should include Sod Meth, 2,4-DCA, CDM, drums and labels. I would
> like to propose that in the future Cedar send receivers to me within 2
> business days after material arrives. I would propose to FedEx receivers
> since they are hard to read from a fax copy.

> 2. I need all production and consumption from fall and spring campaign
> in an excel spreadsheet.

> 3. I would like to have an end of run physical inventory count on all
> items used in the production of Cyclanilide.

> 4. I would like to request all shipments/proof of deliveries from
> CreaNova so I can match to Cedar's receivers.

>

> That should do it.

2,258. x
50.=
112,900.*

1,824.*+
2,253. -
934. *

1,824.*+
304. +
2,128. *

2,128.*+
2,253. -
130. *

0. *

17.*+
17. *

17. x
130.=
2,210.*

<i>Date</i>	<i>B/L#</i>	<i>Ship to</i>	<i>Shipper</i>	<i>Product</i>	<i>Cont#</i>	<i>Qty</i>	<i>Misc</i>
5/8/2001	4-21331 ✓	Aventis	American Freightway	Cyclanilide	P14810	110	Lot#7811018-1dr@110lbs
5/9/2001	80096435 ✓	Aventis	American Freightway	Cyclanilide		330	Lot#009,013 & 022 3@110lbs
5/11/2001	80096431	Aventis	American Freightway	2, 4 DCA		10,141	23drums@441lbs ea
5/21/2001	80096430	Aventis	Trans Carriers	2,4 DCA	756	42,840	72drums@270kgs-per drum
5/21/2001	80096429	Aventis	Trans Carriers	2,4 DCA	6066	42,840	72drums@270kgs-per drum
5/22/2001	80096428	Aventis	Trans Carriers	2,4 DCA	18658	40,480	68drums@270kgs-per drum
6/15/2001	80104460	Aventis	Empire Express	Cyclanilide	53498	14,300	130drs@110lbs ea
6/15/2001	80104459	Aventis	Empire Express	Cyclanilide	53397	14,300	130drs@110lbs ea
6/21/2001	80105389 ✓	Aventis	Empire Express	Cyclanilide	53402	14,300	130drs@110lbs ea
6/21/2001	80105390 ✓	Aventis	Empire Express	Cyclanilide	53430	14,300	130drs@110lbs ea
6/25/2001	80105392	Aventis	Empire Express	Cyclanilide	53407	14,300	130drs@110lbs ea
6/25/2001	80105391 ✓	Aventis	Empire Express	Cyclanilide	53338	14,300	130drs@110lbs ea
6/27/2001	80105393 ✓	Aventis	Empire Express	Cyclanilide	53576	14,300	130drs@110lbs ea
6/29/2001	80107047 ✓	Aventis	Empire Express	Cyclanilide		14,300	130drs@110lbs ea
7/18/2001	80109216 ✓	Aventis	Empire Express	Cyclanilide	18649	14,300	130drs@110lbs ea
7/18/2001	80105394 ✓	Aventis	Empire Express	Cyclanilide	18651	14,300	130drs@110lbs ea
7/23/2001	80110040 ✓	Aventis	Empire Express	Cyclanilide	53391	14,300	130drs@110lbs ea
7/23/2001	80110039 ✓	Aventis	Empire Express	Cyclanilide	53458	14,300	130drs@110lbs ea
7/25/2001	80110038 ✓	Aventis	Empire Express	Cyclanilide	53662	14,300	130drs@110lbs ea
7/26/2001	80110037 ✓	Aventis	Empire Express	Cyclanilide	53413	14,300	130drs@110lbs ea
7/30/2001	80110887 ✓	Aventis	Empire Express	Cyclanilide	53339	14,300	130drs@110lbs ea
7/30/2001	80110888 ✓	Aventis	Empire Express	Cyclanilide	53425	14,300	130drs@110lbs ea
7/31/2001	80110888 ✓	Aventis	Empire Express	Cyclanilide	53645	14,300	130drs@110lbs ea

Wednesday, August 08, 2001

Page 2 of 3

81069215 716

AB0000028838

<i>Date</i>	<i>B/L#</i>	<i>Ship to</i>	<i>Shipper</i>	<i>Product</i>	<i>Cont#</i>	<i>Qty</i>	<i>Misc</i>
<i>Total:</i>						1,035,161	

09/05/01 08:34

Raw Materials Acceptance Specs

Page # 1

Chemical	Supplier Name	City	State	Spec #
1,4 DCA, CYC	VARIOUS			910200
Test Method Type	Low	High	Description	
2,4 DCA% COA	99.0000	100.0000		

COPY 2

Chemical	Supplier Name	City	State	Spec #
ACETIC ACID				910194
Chemical Supplier Name	City	State	Spec #	
ACETIC ACID	A AND W AMERICAS	CHARLESTON	SC	910058
Test Method Type	Low	High	Description	
ACETIC % COA	96.5000	100.0000	ACETIC %	96.5 min

Chemical	Supplier Name	City	State	Spec #
ACETIC ANHYD	EASTMAN CHEMICAL CO.	KINGSPORT	TN	910090
Test Method Type	Low	High	Description	
ANHYD % COA	99.5000	100.0000	99.5% min	

Chemical	Supplier Name	City	State	Spec #
ACETIC ANHYD	HOECHST-CELANESE	PAMPA	TX	910034
Test Method Type	Low	High	Description	
ANHYD % COA	99.5000	100.0000	ANHYDRIDE %	99.5 min

Chemical	Supplier Name	City	State	Spec #
ACETIC TRUCK	CONE SOLVENTS	MEMPHIS	TN	910108
Test Method Type	Low	High	Description	
%PURITY coa	99.8500	100.0000	purity	
ACETIC % COA	95.0000	99.9000	95-99.9% active	

Chemical	Supplier Name	City	State	Spec #
ACETIC\FMC	CONE SOLVENTS	MEMPHIS	TN	910136
Test Method Type	Low	High	Description	
% ACTIVE COA	95.0000	99.9000	% acetic acid active	
%PURITY coa	99.8500	100.0000	purity for glacial acetic acid	

Chemical	Supplier Name	City	State	Spec #
ACETONE	JLM INDUSTRIES	MT VERNON, INDIANA	IN	910057
Test Method Type	Low	High	Description	
WATER % COA	0.0100	0.3000	0.3% water max	

Chemical	Supplier Name	City	State	Spec #
ACETONE	IDEAL	MEMPHIS	TN	910056
Test Method Type	Low	High	Description	
WATER % COA	N	0.0100	0.3000	WATER IN ACETONE 0.3% max

APPROVED

SEP 12 2001

BY: *AS Puchner*

AB0000025282

Chemical	Supplier Name		City		State	Spec #
AGENT 1568-6	STEPAN		WINDER		GA	910064
Test	Method	Type	Low	High	Description	
PERFORMN	PROP-7		1.0000	3.0000	1 = fail, 2 = pass	
WATER %	GAM-2		0.0100	2.0000	.	

Chemical	Supplier Name		City		State	Spec #
AGNT X205615	STEPAN		WINDER		GA	910103
Test	Method	Type	Low	High	Description	
PERMFORN	PROP-7		1.0000	3.0000	PROPANIL EMULSION PERFORMANCE 1 = fail, 2 = pass	
WATER %	GAM-2		0.0100	2.0000	.	

Chemical	Supplier Name	City	State	Spec #
ALUM SULFATE	CONE SOLVENTS	MEMPHIS	TN	910133
Test	Method	Type	Low	High
WT % ALM COA			48.0000	52.0000

Chemical	Supplier Name	City	State	Spec #
ANHYD. HCL	VARIOUS			910094
Test	Method	Type	Low	High
%HCL-ANH from COA			99.0000	100.0000
% anhydrous HCL 99% min				

Chemical	Supplier Name	City	State	Spec #
AU-522	ADJU. UNLLIM .3LB EMULS.	TULSA	OK	910043
Test	Method	Type	Low	High
PERFORMN PROP-7			1.0000	3.0000
1 = fail, 2 = pass.				
WATER % GAM-2			0.0100	2.0000

Chemical	Supplier Name	City	State	Spec #
3 AROMATICS	BASIS PETROLEUM	HOUSTON	TX	910021
Test	Method	Type	Low	High
B AROMAT COA			1.0000	3.0000
1 = not B grade, 2 = is B grade				

Chemical	Supplier Name	City	State	Spec #
3 AROMATICS	PHIBRO	HOUSTON	TX	910055
Test	Method	Type	Low	High
B AROMAT COA			1.0000	3.0000
1 = not B grade, 2 = is B grade				

Chemical	Supplier Name	City	State	Spec #
3-ODCB				910004
Test	Method	Type	Low	High
%ODCB	na		98.0000	100.0000
Bayer ODCB 98.5%min odcb, 1% max pdcb				
%PDCB	na		0.0010	2.0000
para				

Chemical	Supplier Name	City	State	Spec #
3HT	VARIOUS			910126
Test	Method	Type	Low	High
ASH	COA		0.0001	0.0020
ASH = 0.002 MAX, 2,6DI-TERT-BUTYL-PARA-CRESOL = BHT				
COLOR	COA		0.0010	5.0000
APHA COLOR OF 10% SOLUTION = 5MAX				
FREEZ PT	COA		0.0010	69.3000
69.2 C MINIMUM FREEZE POINT				
MOISTURE	COA		0.0001	0.0500
0.05% MAX MOISTURE				
PURITY	COA		99.0000	100.0000
2,6-DITERT-BUTYL PARA-CRESOL = BHT				

Chemical	Supplier Name	City	State	Spec #
3ROMINE	VARIOUS			910183

Test.	Method	Type	Low	High	Description
BROMIN %	COA		99.9000	100.0000	.

Chemical	Supplier Name	City	State	Spec #
BUTYL ALCOHL	SHELL CHEMICAL CO	DEER PARK	TX	910060

Test	Method	Type	Low	High	Description
BUTYL %	COA		99.0000	100.0000	99%min.

Chemical	Supplier Name	City	State	Spec #
C-5643 EMULS	WITCO	MEMPHIS	TX	910205

Test	Method	Type	Low	High	Description
EMULS	COA		1.0000	2.0000	.
WATER %	COA		0.0100	1.0000	.

Chemical	Supplier Name	City	State	Spec #
2ALC CHLORID	TETRA CHEMICALS	WEST MEMPHIS	AR	910062
Test Method Type	Low	High	Description	
NO SPEC. no specs	1.0000	3.0000	no specification required - 1=we reject, 2 = we accept.	

Chemical	Supplier Name	City	State	Spec #
2ALCCHLR-FMC	VARIOUS			910154
Test Method Type	Low	High	Description	
CACL2 % coa	34.0000	38.0000	.	

Chemical	Supplier Name	City	State	Spec #
2ATALYST-DCA	JOHNSON MATTHEY	WEST DEPTFORD	NJ	910167
Test Method Type	Low	High	Description	
ACTIVITY R&D	6.0000	12.0000	.	

Chemical	Supplier Name	City	State	Spec #
2ATLYST-CYMP	VARIOUS			910151
Test Method Type	Low	High	Description	
PALLADIM COA	G 5.0000	0.0000	.	

Chemical	Supplier Name	City	State	Spec #
2AUSTIC\FMC	CHEMTECH.	MEMPHIS	TN	910134
Test Method Type	Low	High	Description	
% NAOH COA	49.0000	51.0000	.	

Chemical	Supplier Name	City	State	Spec #
2HLORINE\FMC	IDEAL	MEMPHIS	TN	910135
Test Method Type	Low	High	Description	
CHLORINE COA	99.5000	100.0000	%chlorine	

Chemical	Supplier Name	City	State	Spec #
2PDM-CYCLAN	CREANOVA			910199
Test Method Type	Low	High	Description	
DIMM % COA	L 1.0000	1.0000	.	
DMF % COA	L 0.7500	0.7500	.	
PURITY % COA	G 97.5000	0.0000	.	

Chemical	Supplier Name	City	State	Spec #
2YCLOHEXANE				910187
Chemical	Supplier Name	City	State	Spec #
2YCLOHEXANE	CONE SOLVENTS	MEMPHIS	TN	910174
Test Method Type	Low	High	Description	
% H2O COA	0.0100	0.1000	.	

Chemical	Supplier Name		City		State	Spec #
DCA	BAYER PRODUCTS		PITTSBURGH		PA	910127
Test	Method	Type	Low	High	Description	
% DCA	COA		98.0000	100.0000	% DCA	
H2O PPM	COA		0.0001	500.0000	Water in DCA	

Chemical	Supplier Name		City		State	Spec #
DCA	TOLOCHIMIE		TOULOUSE			910146
Test	Method	Type	Low	High	Description	
DCA %	COA		98.0000	100.0000	.	
WATERPPM	COA		10.0000	1000.0000	.	

Chemical	Supplier Name	City	State	Spec #
CA RM-PROCH	PROCHROM INC.	SALVADOR-BAHTI		910104
Test	Method	Type	Low	High
COA	COA		98.0000	100.0000
Description 98%min., 500 ppm water max				

Chemical	Supplier Name	City	State	Spec #
CP-DOVER	SCHNECTADY CHEMICAL			910163
Test	Method	Type	Low	High
ASSAY %	COA		95.0000	100.0000
H2O PPM	COA		0.0100	200.0000
Description .				

Chemical	Supplier Name	City	State	Spec #
CPD	BF GOODRICH	CALVERT CITY	KY	910125
Test	Method	Type	Low	High
C10, ACET	COA		0.0025	0.0055
DCPD %	COA	G	99.0000	100.0000
OXY'S	COA	L	0.0001	0.0025
WATER	COA		0.0001	100.0000
Description C10% % DCPD 0.0025% MAX 100 PPM WATER MAX				

Chemical	Supplier Name	City	State	Spec #
CPD	KMTEX	PORT ARTHUR	TX	910045
Test	Method	Type	Low	High
C10 ACET	COA		0.0025	0.0055
DCPD %	COA	G	99.0000	100.0000
OXYS	COA	L	0.0001	0.0025
WATER	COA		0.0001	100.0000
Description C10 % 99%min 0.0025%MAX 100 PPM MAX WATER				

Chemical	Supplier Name	City	State	Spec #
CPD	VARIOUS			910165
Test	Method	Type	Low	High
C10	COA		0.0025	0.0055
DCPD	COA		99.0000	100.0000
OXY	COA		0.0001	0.0025
WATER	COA		0.0001	100.0000
Description C10 ACETYLENES %DCPD 99.0%MIN OXY 0.0025% MAX WATER 100 PPM MAX				

Chemical	Supplier Name	City	State	Spec #
CPI	TOLOCHIMIE	TOULOUSE		910031
Test	Method	Type	Low	High
DCPI %	COA		98.0000	100.0000
Description 98%min				

Chemical	Supplier Name	City	State	Spec #
CPI, PPG	PPG INDUSTRIES	NATRIUM	WV	910202
Test	Method	Type	Low	High
Description				

2,3 DCPI COA	0.0100	0.9000 .
DCPI, % COA	98.7000	100.0000 .

Chemical	Supplier Name	City	State	Spec #
DEAC	VARIOUS			910123

Test	Method	Type	Low	High	Description
ALUMINUM	COA		21.9000	22.4000	DIETHYLALUMINUM CHLORIDE = DEAC
APPEAR	COA		0.0001	100.0000	TYPICAL, TYPICAL = 100
CHLORIDE	COA		29.2000	29.7000	CHLORIDE
CL/AL	COA		1.0000	1.0300	MOLAR RATIO
ETHANE	COA		98.0000	100.0000	ETHANE MOLAR%
HYDROGEN	COA		0.0001	0.2000	HYDROGEN MOLEAR% 0.2 MAX
IBUTANE	COA		0.0001	0.2000	IBUTANE MOLAR % 0.2MAX
NBUTANE	COA		0.0001	2.0000	2 % MAX NBUTANE MOLAR %

Chemical	Supplier Name	City	State	Spec #
DICNIL-CYMP	VARIOUS			910153
Test	Method	Type	Low	High
DICNIL % COA			0.0100	100.0000
Description				

Chemical	Supplier Name	City	State	Spec #
DIENE RUBBER	FIRESTONE	LAKE CHARLES	LA	910189
Test	Method	Type	Low	High
DIENE COA			1.1000	2.0000
BFG PREAPPROVES THIS MATERIAL.				
Description				

Chemical	Supplier Name	City	State	Spec #
MA	AIR PRODUCTS	DECATUR	AL	910068
Test	Method	Type	Low	High
%DMA COA			99.0000	100.0000
DMA 99%min				
Description				

Chemical	Supplier Name	City	State	Spec #
MA	AIR PRODUCTS.	LEHIGH VALLEY	PA	910069
Test	Method	Type	Low	High
% DMA COA			99.0000	100.0000
dma 99% min				
Description				

Chemical	Supplier Name	City	State	Spec #
MA	ACCRON	SPRING	TX	910210
Test	Method	Type	Low	High
DMA% COA			99.0000	100.0000
Description				

Chemical	Supplier Name	City	State	Spec #
MA	SHELL CHEMICAL CO	DEER PARK	TX	910207
MF	AIR PRODUCTS	DECATUR	AL	910033
Test	Method	Type	Low	High
DMF % COA			99.9000	100.0000
99.9% min, 500ppm water max				
Description				

Chemical	Supplier Name	City	State	Spec #
MF	AIR PRODUCTS	DECATUR	AL	910033
Test	Method	Type	Low	High
DMF % COA			99.9000	100.0000
99.9% min, 500ppm water max				
Description				

Chemical	Supplier Name	City	State	Spec #
DPO-PENTABRM	DOW CHEMICAL	FREEPORT	TX	910179
Test	Method	Type	Low	High
DPO % COA			99.0000	100.0000
DPO %				
Description				

Chemical	Supplier Name	City	State	Spec #
EDC	OCCIDENTAL CHEMICAL	BAYPORT	TX	910087
Test	Method	Type	Low	High
EDC % COA			99.9400	100.0000
99.95% min				
Description				

Chemical	Supplier Name		City		State	Spec #
EDC	VARIOUS					910114
Test	Method	Type	Low	High	Description	
%EDC	COA		99.9400	100.0000	EDC raw material for TA production	

Chemical	Supplier Name		City		State	Spec #
MULS-MOLNTE	WITCO		MEMPHIS		TX	910177
Test	Method	Type	Low	High	Description	
PERFORM	DICK FRA		0.0100	2.0000	.	

Chemical	Supplier Name		City		State	Spec #
PAC	VARIOUS					910120
Test	Method	Type	Low	High	Description	
BFG OK'D	none		1.0000	3.0000	1 = no / 2 = yes bfg approved	

Chemical	Supplier Name	City	State	Spec #
THANOX 330	VARIOUS			910102
Test	Method	Type	Low	High
APPEAR	COA		10.0000	101.0000
PURITY	COA		98.0000	100.0000
SETPOINT	COA		154.0000	2000.0000
Description APPEARANCE = WHITE TO LIGHT STRAW CRYSTALLS, 100 = YES %PURITY 154 MIN.				

Chemical	Supplier Name	City	State	Spec #
ETHYLENE OXD	VARIOUS			910093
Test	Method	Type	Low	High
%E.O.	from COA		99.5000	100.0000
%WATER	from COA		0.0100	0.0300
Description 99.5% min Ethylene Oxide, 300 PPM max water %moisture in EO				

Chemical	Supplier Name	City	State	Spec #
FERRIC CHLRD	VARIOUS			910182
Test	Method	Type	Low	High
FECL %	COA		96.0000	100.0000
FERUS CL	COA		0.0100	3.0000
IMPURS %	COA		0.0100	1.0000
Description .				

Chemical	Supplier Name	City	State	Spec #
MC STEP 4	FMC CORP APG	BALTIMORE	MD	910129
Test	Method	Type	Low	High
STEP 4	COA	N	0.0000	2.0000
Description CUSTOMER APPROVED PRODUCT =2, 1= NOT APPROVED				

Chemical	Supplier Name	City	State	Spec #
MC-80-1				910149

Chemical	Supplier Name	City	State	Spec #
ORMALDEHYDE	DYNEA			910211

Test	Method	Type	Low	High	Description
FORM %	coa		44.5000	45.5000	.
MEOH, %	COA		4.5000	6.0000	.

Chemical	Supplier Name	City	State	Spec #
ORMALDEHYDE	NESTE RESINS	WINNFIELD	LA	910191

Test	Method	Type	Low	High	Description
FORM %	COA		44.5000	45.5000	FORMALDEHYDE
MEOH %	COA		4.5000	6.0000	.

Chemical	Supplier Name	City	State	Spec #
ORMALDEHYDE	GEORGIA PACIFIC	TAYLORSVILLE, MS	MS	910066

Test	Method	Type	Low	High	Description
FORM %	COA		44.5000	45.5000	44.5 - 45.5% formaldehyde / 4.5-6% Meoh

MEOH, % COA 4.5000 6.0000 .

Chemical	Supplier Name	City	State	Spec #
FORMALDEHYDE	SPURLOCK ADHESIVES			910065
Test Method Type	Low	High	Description	
FORM % COA	44.5000	45.5000	44.5 - 45.5 Formaldehyde, 4.5 - 6% Meoh	
MEOH % COA	4.5000	6.0000 .		

Chemical	Supplier Name	City	State	Spec #
FORMIC, CYCLA	VARIOUS			910201
Test Method Type	Low	High	Description	
FORMIC % COA	G 85.0000	0.0000 .		

Chemical	Supplier Name	City	State	Spec #
ICL	VULCAN	BIRMINGHAM	AL	910026
Test Method Type	Low	High	Description	
HCL % COA	31.5000	34.0000	31.5 - 34% HCL	
Chemical	Supplier Name	City	State	Spec #
ICL (ANHYDR.)	VARIOUS			910106
Test Method Type	Low	High	Description	
HCL/PURE COA	99.0000	100.0000	99% Min. anhydrous for unit 5	
Chemical	Supplier Name	City	State	Spec #
IEPTNE DIR	CONE SOLVENTS	MEMPHIS	TN	910083
Test Method Type	Low	High	Description	
WATER % COA	0.0100	0.1000	0.1% water max	
Chemical	Supplier Name	City	State	Spec #
IEPTNE BFG	CONE SOLVENTS	MEMPHIS	TN	910084
Test Method Type	Low	High	Description	
IBP D F. COA	195.0000	205.0000	initial boiling point	
WATER % COA	0.0100	0.1000	.	
Chemical	Supplier Name	City	State	Spec #
HYDROGEN	PRAXAIR	MCINTOSH	AL	910086
Test Method Type	Low	High	Description	
HYDRO % COA	99.9000	100.0000	99.9% min.	
Chemical	Supplier Name	City	State	Spec #
IPA-CYMP	CONE SOLVENTS	MEMPHIS	TN	910150
Test Method Type	Low	High	Description	
IPA % COA	99.0000	100.0000	IPA FOR CYMP 99.0 MINIMUM	
Chemical	Supplier Name	City	State	Spec #
SOMIBK STAM	CONE SOLVENTS	MEMPHIS	TN	910070
Test Method Type	Low	High	Description	
WATER % COA	0.0100	0.4000	0.4% water max	
Chemical	Supplier Name	City	State	Spec #
SOMIBK STAM	UNION CARBIDE	CHARLESTON	WV	910071
Test Method Type	Low	High	Description	
WATER % COA	0.0100	0.4000	0.4% water max	
Chemical	Supplier Name	City	State	Spec #
SOPHORONE	CONE SOLVENTS	MEMPHIS	TN	910038

Test.	Method	Type	Low	High	Description
WATER	% COA		0.0100	0.5000	0.5% water max

Chemical	Supplier Name	City	State	Spec #
SOPHORONE	UNION CARBIDE	CHARLESTON	WV	910067

Test	Method	Type	Low	High	Description
WATER	% COA		0.0100	0.5000	0.5% water max

Chemical	Supplier Name	City	State	Spec #
SOPHORONE	ACETO AGRICULTURAL CHEMS.	LAKE SUCCESS,	NY	910116

Test	Method	Type	Low	High	Description
WATER, % COA			0.0100	0.5000	.

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Chemical	Supplier Name	City	State	Spec #
(SOPHORONE	VARIOUS			910112
Test	Method	Type	Low	High
WATER	coa		0.0010	0.5000
Description 0.5% WATER MAX FROM COA				

Chemical	Supplier Name	City	State	Spec #
LIME	BRAVO LIME COMPANY	SAGINAW,	AL	910050
Test	Method	Type	Low	High
HYDRATED	COA		1.0000	3.0000
Description Hydrated grade/ 1 = no, 2 = yes				

Chemical	Supplier Name	City	State	Spec #
I-680	CONE SOLVENTS	MEMPHIS	TN	910036
Test	Method	Type	Low	High
WATER %	COA		0.0101	0.5000
Description 0.5% water max				

Chemical	Supplier Name	City	State	Spec #
IESITYL OXD.	HOECHST-CELANESE	PAMPA	TX	910047
Test	Method	Type	Low	High
WATER %	COA		0.0100	0.5000
Description 0.5% water max				

Chemical	Supplier Name	City	State	Spec #
ETHANOL	CHEMTECH	ST LOUIS,	MO	910113
Test	Method	Type	Low	High
MEOH %	COA		99.0000	100.0000
Description 99.0 % MINIMUM				

Chemical	Supplier Name	City	State	Spec #
ETHANOL	METHANEX	MEDICINE HAT, ALB, CANADA		910030
Test	Method	Type	Low	High
MEOH %	COA		99.0000	100.0000
Description 99.% Meoh min				

Chemical	Supplier Name	City	State	Spec #
ETHANOL, CYC	CONE SOLVENTS	MEMPHIS	TN	910196
Test	Method	Type	Low	High
MEOH, %	COA	G	99.0000	0.0000
Description .				

Chemical	Supplier Name	City	State	Spec #
ETHANOL\TA	CONE SOLVENTS	MEMPHIS	TN	910168
Test	Method	Type	Low	High
ASSAY %	COA		99.0000	100.0000
IMPURS	MS-1		1.0000	2.0000
WATER %	COA		0.0100	0.2000
Description .				

Chemical	Supplier Name	City	State	Spec #
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METHNOL\FMC	CONE SOLVENTS				MEMPHIS	TN	910137
Test	Method	Type	Low	High	Description		
% MEOH	COA		85.0000	100.0000	.		
%H2O	COA		0.0100	5.0000	.		

Chemical	Supplier Name				City	State	Spec #
METHOL-DOVER	CONE SOLVENTS				MEMPHIS	TN	910162
Test	Method	Type	Low	High	Description		
ASSAY %	COA		95.0000	100.0000	.		
H2O PPM	COA		0.0100	200.0000	.		

Chemical	Supplier Name				City	State	Spec #
METHYLATECYC	DEGUSSA						910198
Test	Method	Type	Low	High	Description		
NAMETHL%	COA		29.5000	31.0000	.		

Chemical	Supplier Name	City	State	Spec #
MIXED ACID	EL DORADO CHEMICAL	ST. LOUIS	MO	910089
Test	Method	Type	Low	High
H2SO4 %	COA		64.0000	66.5000
HNO3 %	COA		33.0000	35.0000
IF WATER			0.0100	1.0000
IS NEG.			0.0100	1.0000
REJECT!!			0.0100	1.0000
THE SHPM			0.0100	1.0000
WATER %	GAM-2		0.0001	0.5000
Description				
Sulfuric 64 - 66.5 / Nitric = 33 -35%				
Nitric				

Chemical	Supplier Name	City	State	Spec #
MOLINATE	HUNGARY			910178
Test	Method	Type	Low	High
MOLINT %	COA	G	96.0000	100.0000
Description				
MOLINATE %				

Chemical	Supplier Name	City	State	Spec #
MOLYB CAT.	VARIOUS			910118
Test	Method	Type	Low	High
BFG OK'D	none		1.5000	3.0000
Description				
1 = no / 2 = yes bfg approved				

Chemical	Supplier Name	City	State	Spec #
MORPHOLINE	VARIOUS			910098
Test	Method	Type	Low	High
%MORPH	COA		99.0000	100.0000
Description				
%morpholine 99% min				

Chemical	Supplier Name	City	State	Spec #
1-PROPANOL	VARIOUS			910166
Test	Method	Type	Low	High
DIST.RNG	COA		96.0000	98.0000
Description				
distillation range of 96-98C max is only spec.				

Chemical	Supplier Name	City	State	Spec #
1-PROPYL ALC	CONE SOLVENTS	MEMPHIS	TN	910170
Test	Method	Type	Low	High
PURITY	dry base		99.9000	100.0000
WATER	by wt.		0.0001	0.1000
Description				
purity on dry basis (without water)				
water 0.1% max				

Chemical	Supplier Name	City	State	Spec #
1ADONE	CONE SOLVENTS	MEMPHIS	TN	910037
Test	Method	Type	Low	High
WATER	COA		0.0100	0.5000
Description				
0.5% max				

Chemical	Supplier Name	City	State	Spec #
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NAOH 20	.	CHEMTECH.		MEMPHIS		TN	910077
Test	Method	Type	Low	High	Description		
NAOH	COA		19.0000	21.0000	19 - 21% Naoh		

Chemical		Supplier Name		City		State	Spec #
NAOH 50		VULCAN		BIRMINGHAM		AL	910074
Test	Method	Type	Low	High	Description		
NAOH	% COA		48.0000	51.0000	48 - 51% Naoh		

Chemical		Supplier Name		City		State	Spec #
NAOH 50		LA ROCHE INDUSTRIES		GRAMERCY		LA	910024
Test	Method	Type	Low	High	Description		
NAOH	% COA		48.0000	51.0000	48 - 51% Naoh		

Chemical	Supplier Name	City	State	Spec #
IAOH 50	IDEAL	MEMPHIS	TN	910072
Test	Method	Type	Low	High
NAOH	% COA		48.0000	51.0000
Description 48 - 51% Naoh				
Chemical	Supplier Name	City	State	Spec #
IAOH 50	CONE\CO FORMOSA PLASTICS	POINT COMFORT	TX	910073
Test	Method	Type	Low	High
NAOH	% COA		48.0000	51.0000
Description 48 - 51% Naoh				
Chemical	Supplier Name	City	State	Spec #
IAOH 50	CHEMTECH.	MEMPHIS	TN	910107
Test	Method	Type	Low	High
NAOH	% COA		48.0000	51.0000
Description 48 - 51% Naoh				
Chemical	Supplier Name	City	State	Spec #
IAOH 50 %RAY	PIONEER	SOMEWHERE ELSE		910023
Test	Method	Type	Low	High
IRON, PPM	COA		0.0100	5.0000
NACL, PPM	COA		0.0100	50.0000
NAOH	% COA		48.0000	51.0000
Description 48 - 51% Naoh,				
Chemical	Supplier Name	City	State	Spec #
IAOH-CYMP	CONE SOLVENTS	MEMPHIS	TN	910152
Test	Method	Type	Low	High
NAOH %	COA		0.0100	100.0000
Description .				
Chemical	Supplier Name	City	State	Spec #
IAOH-DOVER	VARIOUS			910158
Test	Method	Type	Low	High
H2O PPM	COA		0.0100	200.0000
NAOH%	COA		99.9000	100.0000
Description .				
Chemical	Supplier Name	City	State	Spec #
IAOH-MEM-ACI	VULCAN	BIRMINGHAM	AL	910088
Test	Method	Type	Low	High
IRON PPM	COA		0.0100	5.0000
NAOH	% COA		49.0000	51.0000
Description 5 ppm Max Iron				
Chemical	Supplier Name	City	State	Spec #
IAOH-RAYON50	BRENNTAG MIDSOUTH			910214
Test	Method	Type	Low	High
FE, PPM	coa		0.0100	5.0000
Description .				

NACL, PPM	coa	0.0100	50.0000	.
NAOH %	coa	48.0000	51.0000	.

Chemical	Supplier Name		City		State	Spec #
NAOH-SOLID	CHEMTECH		ST LOUIS,		MO	910075
Test	Method	Type	Low	High	Description	
NAOH	COA		95.0000	100.0000	95% Naoh Min	

Chemical	Supplier Name		City		State	Spec #
NAOH50	VERTEX		MEMPHIS		TN	910175
Test	Method	Type	Low	High	Description	
NAOH %	COA		48.0000	51.0000	.	

Chemical	Supplier Name	City	State	Spec #
NICKEL	VARIOUS			910110
Test	Method	Type	Low	High
RAINEY?	OR RQ?		1.0000	3.0000
Description SPONGE, RAINEY NICKEL 1 = NO, 2 = YES				
Chemical	Supplier Name	City	State	Spec #
NICKEL CAT.	ACTIVATED METALS	SEVIERVILLE	TN	910117
Test	Method	Type	Low	High
NICKEL	COA		2.0000	2.0000
Description 1 for no,, 2 for yes				
Chemical	Supplier Name	City	State	Spec #
NIT.ACID\FMC	EL DORADO CHEMICAL	ST. LOUIS	MO	910138
Test	Method	Type	Low	High
% H2O	COA		0.0001	0.0001
% HNO3	COA		60.0000	85.0000
% OLEUM	COA		0.5000	2.5000
Chemical	Supplier Name	City	State	Spec #
NITRIC ACID	ELDORADO CHEMICAL	EL DORADO	AR	910007
Test	Method	Type	Low	High
NITRIC % COA			98.0000	100.0000
Description 98% Min				
Chemical	Supplier Name	City	State	Spec #
NITRIC ACIF	ELDORADO CHEMICAL	EL DORADO	AR	910156
Test	Method	Type	Low	High
IRON,PPM	COA		0.0100	50.0000
NITRIC % COA			98.0000	100.0000
Description Iron, ppm				
Chemical	Supplier Name	City	State	Spec #
NITROGEN	AIR PRODUCTS	DECATUR	AL	910008
Test	Method	Type	Low	High
OXYG PPM	COA		0.0100	3.0000
WATERPPM	COA		0.0100	3.0000
Description 3 ppm Oxygen max 3 PPM Water max				
Chemical	Supplier Name	City	State	Spec #
NITROGEN	PRAXAIR	MCINTOSH	AL	910186
Test	Method	Type	Low	High
H2O,PPM	COA		0.0100	5.0000
O2, PPM	COA		0.0100	8.0000
Description				
Chemical	Supplier Name	City	State	Spec #
NITROMETHANE	AUSTIN CHEMICAL			910128
Test	Method	Type	Low	High
Description				

% NM. COA 99.5000 100.0000 % Nitromethane

Chemical	Supplier Name	City	State	Spec #	
NITROMETHANE	ACETO AGRICULTURAL CHEMS	LAKE SUCCESS	NY	910192	
Test	Method	Type	Low	High	Description
NITMET %	COA		99.5000	100.0000	.

Chemical	Supplier Name	City	State	Spec #	
NITROMETHANE	WEGO	GREAT NECK	NY	910032	
Test	Method	Type	Low	High	Description
NM. %	COA		99.5000	100.0000	99.5% min

Chemical	Supplier Name	City	State	Spec #
NITROPROPANE	ANGUS			910215
Test	Method	Type	Low	High
1-NP %	COA		99.0000	100.0000
H2O %	COA		0.0100	0.2000
Description				
Chemical	Supplier Name	City	State	Spec #
VORCAT	VARIOUS			910119
Test	Method	Type	Low	High
BFG OK'D	none		1.5000	3.0000
Description	1 = no / 2 = yes bfg approved			
Chemical	Supplier Name	City	State	Spec #
ODCB	SOLUTIA	SAUGET	IL	910130
Test	Method	Type	Low	High
ODCB %	COA		98.5000	100.0000
PDCB %	COA		0.0100	1.0000
Description	ODCB % PDCB %			
Chemical	Supplier Name	City	State	Spec #
ODCB	STANDARD CHLORINE	DELAWARE CITY,	DE	910009
Test	Method	Type	Low	High
ODCB %	COA		98.5000	100.0000
PDCB %	COA		0.0100	1.0000
Description	98.5% odcB min, 1% pdcB max			
Chemical	Supplier Name	City	State	Spec #
ODCB	METACHEM\STANDARD	DELAWARE CITY	DE	910164
Test	Method	Type	Low	High
ODCB %	COA		98.5000	100.0000
PDCB, %	COA		0.0100	1.0000
Description				
Chemical	Supplier Name	City	State	Spec #
ODCB	PPG INDUSTRIES	NATRIUM	WV	910046
Test	Method	Type	Low	High
ODCB %	COA		98.4999	100.0000
PDCB %	COA		0.0100	1.0000
Description	98.5 % min ODCB, 1% max pdcB 98.5%min ODCB/ 1.0%PDCB max			
Chemical	Supplier Name	City	State	Spec #
ODCB	MONSANTO	SAUGET	IL	910010
Test	Method	Type	Low	High
ODCB %	COA		98.5000	100.0000
PDCB %	COA		0.0100	1.0000
Description	98.5% min odcB, 1% max pdcB			
Chemical	Supplier Name	City	State	Spec #
OLEUM \FMC	FMC	GREEN RIVER	WY	910139

Test.	Method	Type	Low	High	Description
% SULF.	COA		104.0000	105.5000	.

Chemical	Supplier Name	City	State	Spec #
ORDRAM	SYNGENTA	BUCKS	AL	910203

Test	Method	Type	Low	High	Description
ORDRAM %	COA		96.0000	100.0000	MOLINATE FOR ORDRAM

Chemical	Supplier Name	City	State	Spec #
PALLIDIUM	VARIOUS			910171

Test	Method	Type	Low	High	Description
% PALLID %			5.0000	100.0000	5% min. Pallidium on Carbon
CARBON	Number		1940.0000	10000.0000	Carbon number 1940 SWR

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Chemical	Supplier Name	City	State	Spec #
PAM	KURRARAY	TOKYO	JP	910029
Test PAM %	Method COA	Type	Low 97.0000	High 100.0000 Description 97% min
Chemical	Supplier Name	City	State	Spec #
PBA	NIPA HARDWICKE	ELGIN	SC	910025
Test PBA %	Method COA	Type	Low 98.5000	High 100.0000 Description 98.5% min
Chemical	Supplier Name	City	State	Spec #
PBALD	AMERIBROM	BEER SHEVA, ISRAEL		910051
Test PBALD %	Method COA	Type	Low 97.0000	High 100.0000 Description 97% min
Chemical	Supplier Name	City	State	Spec #
PCE	SAFETY KLEEN	Hebron	oh	910217
Test H2O, PPM	Method coa	Type	Low 0.0100	High 200.0000 Description .
Chemical	Supplier Name	City	State	Spec #
PCL3	A AND W AMERICAS	CHARLESTON	SC	910049
Test PCL3 %	Method COA	Type	Low 99.0000	High 100.0000 Description 99% min
Chemical	Supplier Name	City	State	Spec #
PCL3	VARIOUS			910095
Test %PCL3	Method from COA	Type	Low 99.5000	High 100.0000 Description % PCL3 for Eth 99.5% min
Chemical	Supplier Name	City	State	Spec #
PE-DOVER	PERSTORP			910160
Test ASSAY, %	Method COA	Type	Low 99.0000	High 100.0000 Description .
H2O, PPM	Method COA	Type	Low 0.0100	High 200.0000 Description .
Chemical	Supplier Name	City	State	Spec #
PENNSPRAY 70	PENNZOIL CO.	SHREVEPORT	LA	910148
Test NAME	Method NAME	Type	Low 1.0000	High 3.0000 Description 1 = NAME DOES NOT MATCH 2 = NAME MATCHES COA
Chemical	Supplier Name	City	State	Spec #
PENNZPAR 71	ATLAS PROCESSING CO			910052

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Test	Method	Type	Low	High	Description
CHK GRDE	COA		1.0000	3.0000	1 = bad, 2 = good, ok

Chemical	Supplier Name	City	State	Spec #
PERKLONE D	ICI CHEMICALS & POLYMERS	WILMINGTON	DE	910155

Test	Method	Type	Low	High	Description
H2O, PPM	COA		0.0100	200.0000	.

Chemical	Supplier Name	City	State	Spec #
PHENOL-DOVER	ARISTECH			910157

Test	Method	Type	Low	High	Description
ASSAY%	COA		99.0000	100.0000	.
H2O, PPM	COA		0.0100	200.0000	.

Chemical	Supplier Name	City	State	Spec #
PLATINUM CAT	JOHNSON MATTHEY	WEST DEPTFORD	NJ	910042
Test Method Type	Low	High	Description	
PERFORM TEST	1.0000	3.0000	1=fail, 2=pass	
Chemical	Supplier Name	City	State	Spec #
PROP ANHYD.	EASTMAN CHEMICAL CO.	KINGSPORT	TN	910022
Test Method Type	Low	High	Description	
ANHYD % COA	98.0000	100.0000	98%min	
Chemical	Supplier Name	City	State	Spec #
PROP. ACID	HOECHST-CELANESE	PAMPA	TX	910041
Test Method Type	Low	High	Description	
PROP % COA	98.0000	100.0000	98%min	
Chemical	Supplier Name	City	State	Spec #
PROP. ACID	UNION CARBIDE	CHARLESTON	WV	910020
Test Method Type	Low	High	Description	
PROP % COA	98.0000	100.0000	98%min	
Chemical	Supplier Name	City	State	Spec #
PROP. ACID	EASTMAN CHEMICAL	LONGVIEW	TX	910013
Test Method Type	Low	High	Description	
PROP % COA	98.0000	100.0000	98%min	
Chemical	Supplier Name	City	State	Spec #
PTPM-TETRA	VARIOUS			910181
Test Method Type	Low	High	Description	
PTPM % COA	35.0000	72.0000	.	
Chemical	Supplier Name	City	State	Spec #
R118118	ZENECA	UNITED KINGDOM		910014
Test Method Type	Low	High	Description	
R118118% COA	33.0000	38.0000	R118118% is 33% min-38% max	
TOL, % COA	0.0000	0.0000	.	
Chemical	Supplier Name	City	State	Spec #
RUBBER	VARIOUS			910101
Test Method Type	Low	High	Description	
ASH COA	0.0001	0.2000	ALKYL LITHIUM POLYMERIZED POLYBUTADIENE = RUBBER	
COLOR COA	0.0001	10.0000	APHA ON COA COLOR	
DIS.TIME COA	0.0001	4.0000	DISSOLVING TIME = 4 HOURS MAX	
MOONEY V COA	47.0000	57.0000	ON COA MOONEY VISCOSITY	

SOL. VIS COA	147.0000	177.0000	SOLUTION VISCOSITY OF 5.43% IN TOLUENE
STABILZR COA	0.5200	1.0800	STABILIZER
TOL.INS COA	0.0001	0.0100	TOLUENE INSOLUBLES ON COA
TURBIDIT COA	0.0001	0.0001	TURBIDITY, SPEC. = CLEAR
VIS.GEL COA	0.0001	0.0001	VISUAL GELS = NIL IS SPEC.
VOL.MAT	0.0001	0.6000	VOLATILE MATTER

Chemical	Supplier Name	City	State	Spec #
SALT	MORTON - SALT (CONE SOLV)	MEMPHIS	TN	910091
Test	Method	Type	Low	High
SALT	% COA		99.5000	100.0000
			Salt % 99.5% min	

09/05/01 , 08:37

Raw Materials Acceptance Specs

Page # 15

Chemical	Supplier Name	City	State	Spec #
SALT	CARGILL	MEMPHIS	TN	910027
Test	Method	Type	Low	High
SALT	% COA		99.0000	100.0000
Description: Salt % = 99% min				
Chemical	Supplier Name	City	State	Spec #
SICL4	VARIOUS			910121
Test	Method	Type	Low	High
PURITY	COA/%wt		99.5000	100.0000
Description: the purity is expressed in %weight, 99.5%minimum. Silvestra				
Chemical	Supplier Name	City	State	Spec #
SOD.CARB\FMC	IDEAL	MEMPHIS	TN	910140
Test	Method	Type	Low	High
% ASSAY	COA		99.2000	100.0000
% H2O	COA		0.0100	0.2500
% NAO2	COA		58.0000	100.0000
GRADE100	COA		0.0100	2.0000
GRADE160	COA		0.0100	2.0000
Chemical	Supplier Name	City	State	Spec #
SODA ASH	IDEAL	MEMPHIS	TN	910053
Test	Method	Type	Low	High
MESH 100	COA		1.0000	3.0000
Description: 80-100 mesh 1 = no, 2 = yes				
Chemical	Supplier Name	City	State	Spec #
SODA ASH	VARIOUS			910122
Chemical	Supplier Name	City	State	Spec #
STEP 3\DMF	FMC CORP APG	BALTIMORE	MD	910132
Test	Method	Type	Low	High
% ACTIVE	COA		17.0000	20.0000
Chemical	Supplier Name	City	State	Spec #
STEPFAC 8170	STEPAN	WINDER	GA	910035
Test	Method	Type	Low	High
PERFORM	PROP-7		1.0000	3.0000
Description: 1 = fail, 2 = pass				
Chemical	Supplier Name	City	State	Spec #
STEROLS	ARCHER DANIEL MIDLAND	DECATUR	GA	910172
Test	Method	Type	Low	High
STEROLS%	COA		90.0000	100.0000
Description: TOTAL FREE STEROLS				
Chemical	Supplier Name	City	State	Spec #
STEROLS	HENKLE CHEMICALS			910173

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Test	Method	Type	Low	High	Description
STEROLS%	COA		90.0000	100.0000	.

Chemical	Supplier Name	City	State	Spec #
SULF ACD ACI	ELDORADO CHEMICAL	EL DORADO	AR	910079

Test	Method	Type	Low	High	Description
IRON PPM	COA		0.0100	40.0000	Iron ppm is 40 max, Sulf % is 93% min, Water % 7 max
SULF %	COA		98.0000	100.0000	Sulfuric Acid %

Chemical	Supplier Name	City	State	Spec #
SULF ACD DCA	ELDORADO CHEMICAL	EL DORADO	AR	910080

Test	Method	Type	Low	High	Description
SULF %	COA		98.0000	100.0000	Sulf % is 98% min

Chemical	Supplier Name	City	State	Spec #
SULF ACD DIR	ELDORADO CHEMICAL	EL DORADO	AR	910081
Test Method Type	Low	High	Description	
SULF % COA	93.0000	100.0000	Sulf % is 93% min	

Chemical	Supplier Name	City	State	Spec #
SULF ACD TA	ELDORADO CHEMICAL	EL DORADO	AR	910082
Test Method Type	Low	High	Description	
SULF % COA	93.0000	100.0000	sulf % = 93% min	

Chemical	Supplier Name	City	State	Spec #
SULF.ACD\FMC	CHEMTECH.	MEMPHIS	TN	910141
Test Method Type	Low	High	Description	
% ASSAY COA	93.0000	100.0000	.	

Chemical	Supplier Name	City	State	Spec #
SULFURIC EO	VARIOUS			910096
Test Method Type	Low	High	Description	
%ACTIVE FROM COA	97.0000	100.0000	SULFURIC FOR SCRUBBER, % Active is 97% min	

Chemical	Supplier Name	City	State	Spec #
500 SOLVNT	MOBIL CHEMICAL	CHALMETTE	LA	910054
Test Method Type	Low	High	Description	
CHK GRDE COA	1.0000	3.0000	1 = fail, 2 = pass	

Chemical	Supplier Name	City	State	Spec #
CAP-ANTIBLZE	A AND W AMERICAS	CHARLESTON	SC	910185
Test Method Type	Low	High	Description	
COA GRADE N	0.0000	0.0000	coa for antiblaze	

Chemical	Supplier Name	City	State	Spec #
TEA FOR 2AB	ATOFINA	Oakville		910216
Test Method Type	Low	High	Description	
TEA % coa	99.0000	100.0000	.	
WATER, % coa	0.0100	0.1000	,	

Chemical	Supplier Name	City	State	Spec #
ENNECO AV-1	CONE SOLVENTS	MEMPHIS	TN	910109
Test Method Type	Low	High	Description	
AV-1 GRD	1.0000	3.0000	1 = is not the right grade, 2 = is the right grade	

Chemical	Supplier Name	City	State	Spec #
EPA	VARIOUS			910124

Test.	Method	Type	Low	High	Description
%TEPA	coa		90.0000	100.0000	tepa for dca storage

Chemical	Supplier Name	City	State	Spec #
THIONYL CHLD	BAYER CHEMICALS	BAYTOWN	TX	910017

Test	Method	Type	Low	High	Description
THIOCHL%	COA		99.0000	100.0000	99% min

Chemical	Supplier Name	City	State	Spec #
TOLUENE	EXXON	HOUSTON	TX	910019

Test	Method	Type	Low	High	Description
TOLUEN %	COA		97.0000	100.0000	% Tol 97% min, % water .05 max
WATER %	COA		0.0100	0.0500	0.05%max

Chemical	Supplier Name		City		State	Spec #
TOLUENE/FMC	FMC		GREEN RIVER		WY	910142
Test	Method	Type	Low	High	Description	
SULFEN%	COA	N	0.0000	0.0000	.	

Chemical	Supplier Name		City		State	Spec #
FOXIMUL 804	STEPAN		WINDER		GA	910016
Test	Method	Type	Low	High	Description	
PERFORM	PROP-7		1.0000	3.0000	1 = fail, 2= pass	

Chemical	Supplier Name		City		State	Spec #
FPP-DOVER	DOVER CHEMICAL		DOVER		OH	910159
Test	Method	Type	Low	High	Description	
ASSAY %	COA		97.0000	100.0000	Assay %	
COLOR	COA		0.0100	50.0000	.	


Chemical	Supplier Name		City		State	Spec #
FPP-TETRA	VARIOUS					910180
Test	Method	Type	Low	High	Description	
TPP %	COA		28.0000	65.0000	.	

Chemical	Supplier Name		City		State	Spec #
XYLENE	CONE SOLVENTS		MEMPHIS		TN	910193
Test	Method	Type	Low	High	Description	
XYLENE % coa		G	99.5000	0.0000	.	

Chemical	Supplier Name		City		State	Spec #
XYLENE-CYCLA	CONE SOLVENTS		MEMPHIS		TN	910195
Test	Method	Type	Low	High	Description	
XYLENE % COA		G	99.5000	0.0000	.	

Chemical	Supplier Name		City		State	Spec #
XYLENE-DOVER	CONE SOLVENTS		MEMPHIS		TN	910161
Test	Method	Type	Low	High	Description	
ASSAY %	COA		95.0000	100.0000	.	
H2O,PPM	COA		0.0100	200.0000	.	

CONSIGNEE DELIVERY RECEIPT

Freight Bill # 067035883 RC TNBR#:		CONSIGNEE CEDAR CHEMICAL 49 PHILLIPS RD 311 HWY 242 HELENA		SHIPPER GREEN PRINTING CO INC 101 LEXINGTON PKY LEXINGTON NC 27295	
Date: 09/07/2001		AR 72342			
H/U	PCS	HM	DESCRIPTION	WGT-LBS	NMFC
	1		PO# NS PRINTED MATTER 000150 FUEL SURCHG LTL SHPT3.00% ** FAK RATES APPLIED **	139	161870-00
					070
1	1		PREPAID - WILL INVOICE THIRD PARTY	139	
ANY ADDITIONAL SERVICES MAY RESULT IN ADDITIONAL CHARGES				B/L #	
CHARGES SUBJECT TO CHANGE*				NS	0.00
Received by:				P.O. #	
Date: 9.11 Arrive: 1214 Depart:				NS	
Delv. Driver: LT2592 Driver #:				 A FedEx Company P.O. Box 840, Harrison, AR 72602-0840 (ARFW) Phone: 800-447-8139 Page 1 of 1	
<input checked="" type="checkbox"/> DELV WITH S/W INTACT 1 # of Skids Delv <input type="checkbox"/> CLEAR <input type="checkbox"/> SHORT <input type="checkbox"/> OVER <input type="checkbox"/> DAMAGE					
EXCEPTIONS:					

PACKING SLIP

JOB NUMBER: 216518

DATE: 09-07-01

CUSTOMER:

SHIP TO:

AVENTIS CROPS SCIENCE
ATTN:

CEDAR CHEMICAL CORP. 64
49 PHILLIPS ROAD #311

DURHAM
27709

NC

HELENA
72342

AR

P.O. NUMBER: 643324

THIS SHIPMENT CONTAINS

2175

CYCLANILIDE 60 KG DRUM LABEL
ACS 23994A/3100 12/00

1 CTN @ 2175

- 2175

SEP 11 2001

JP

TOTAL = 2175

WRITTEN BY:

JL

PACKED BY:

XX

SHIPPED BY:

A. FREIGHTWAYS

RECEIVED BY:

James Parks

Green

PRINTING COMPANY, INC.
P. O. Box 1167 / Lexington N. C.

AVENTIS CROPSCIENCE
NORTH AMERICAN SUPPLY CHAIN
Purchasing Department

FACSIMILE

MAILING ADDRESS

PO Box 12014

Research Triangle Park, NC 27709

DATE: 13 December, 2000

TO: LISA WALKER

LOCATION: CEDAR CHEMICAL

FAX NO: 870/572-3795

TOTAL NO. PAGE (Including Cover Sheet): 1

FROM: DAVID LINHARDT (TEL. 919/549-2100) (FAX. 919/549-2789)

MESSAGE: CYCLANILIDE DRUMS

Lisa.. this is confirmation that the OS-30 drum supplied by Greif Bros. is acceptable for storage and transport of cyclanilide technical.

We would prefer to use the straight walled drums rather than the tapered drums due to ease of palletizing and stretch-wrapping. Based on the hazard classification of cyclanilide, we only require Y180 construction/certification.

If you need any further assistance, please call.



Dave Linhardt

Cc: Sue Fritz

JIM KEVIN PARKER KRUSLING

Confirmation Report-Memory Send

Time : Nov-27-00 14:31
Tel line 1 : +8705723795
Name : CEDAR CHEMICAL

Job number : 805
Date : Nov-27 14:29
To : 18195492003
Document Pages : 02
Start time : Nov-27 14:29
End time : Nov-27 14:31
Pages sent : 02

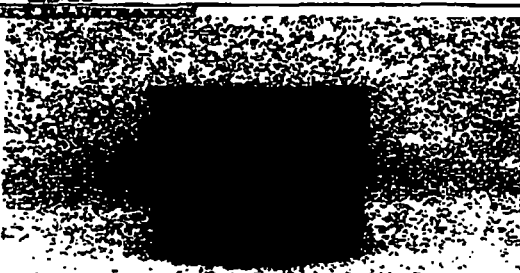
Job number : 805

*** SEND SUCCESSFUL ***

NO. 1236 P 2/3



GREIF BROS. CORPORATION INDUSTRIAL SHIPPING CONTAINER GROUP PLASTIC DRUM STANDARD PRODUCT DESCRIPTION

Product Identification Numbers PS-30X-XK-XK-XK-XK-XK-XK Body: OS-30 Cover: Plain & B & V Lockhead: ALL & Bolt Ring: 2" & W"		Product Description 	
Standard Capacity: 30.0 U.S. Gallons Actual Capacity: 32.2 U.S. Gallons Export Code: 605 CH B Min. Working Pressure: 12.7 inches	Capacity: 22 U.S. Gallons Capacity %: 7.3 % Overall Height: 29.4 inches Body Height: 28.1 inches	Opening I.D.: 17.5 inches Neckal O.D.: 19.3 inches Min. Wall Thickness: 0.125 inches Min. Flange Height: 11.4 inches	Total Weight: 14.6 lbs Body Weight: 11.3 lbs Case Weight: 0.530 inches
SPECIAL NOTES: 1) Maximum filling temperature -160 degrees F. When filled at this maximum temperature drum should be allowed to cool to ambient prior to stacking. 2) Stack 3 high (1 + 2) maximum with pallets between drums. Maximum top load on bottom drums not to exceed 600 lbs. each. Pallets should be of good quality, which provide adequate support for plastic drums. 3) Recycle symbol embossed on bottom. 4) Handle with palletfork, side grabber, and sling. 5) All dimensions are nominal. 6) For use with hazardous dry product in accordance with 49CFR. 7) The XK150 rating is produced at Houston. 8) The Y150 rating is produced at Lockport.			
Tech Services: Signature: <u>Leigh D. Evans</u> Date: <u>12/17/99</u>		Revision Date: 12/13/99	
Manufacturing: Signature: <u>Timothy R. Webber</u> Date: <u>12/22/99</u>		OS-30	
Sales: Signature: <u>J. Craig</u> Date: <u>1/3/00</u>			

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ca00aevo

AB0000028954

To: "krusling@cvrtmail.com" <krusling@cvrtmail.com>
Subject: FW: Cyclaniilide

-----Original Message-----

From: Serge.Ravet@aventis.com [SMTP:Serge.Ravet@aventis.com]
Sent: Tuesday, November 14, 2000 11:37 AM
To: jmancini@cvrtmail.com
Cc: Dan.Stahl@aventis.com
Subject: RE: Cyclaniilide

Joe;

Herefter the characteristics of the drum so far been used for Cyclanilide, obviously these datas are given in the metric system:

PE Drum with two flat sides:

volume : 120 l

Height: 900 mm

Width: 396 mm

Weight: 5,70 kg

Color: blue

Net Weight: 50 kg

regrouped with 6 drums on 1 pallett 1000x1200 mm.

We are checking at the moment the kind of internal bag which was used.

Concerning the meeting in december, Pierre and I are oblige to delay by one week and now we are thinking the 19 th of december, will it be OK on your side.

Best regards.

Serge Ravet

-----Message d'origine-----

De: Stahl, Dan

Date: vendredi 10 novembre 2000 16:22

A: Cedar Chemical Corporation

Cc: Ravet, Serge

Objet: Cyclaniilide

Joe-

In regards to the drum issue, Serge has indicated that Cedar is to provide the drums following the same spec as currently being used.

Serge, since I am out of the office could you fax directly to Joe the specifications. His fax number is 901 684.5398.

In regards to my question on the Pre Manufacturing Notifications, I am just working through my check list and I wanted to confirm with you that Cedar has completed this step.

Thanks for your help!

Dan Stahl

Aventis Industrial Strategy

Phone: 919.549.2195

Fax: 919.549.2003

Mobile: 919.599.1525

E-mail: Dan.Stahl@aventis.com

From: Albert Pirigy [<ajpirigyjr@hotmail.com>](mailto:ajpirigyjr@hotmail.com)
To: [<lwalker@cvrtmail.com>](mailto:lwalker@cvrtmail.com); [<dmalcolm@cvrtmail.com>](mailto:dmalcolm@cvrtmail.com)
Date: Monday, November 13, 2000 3:21 AM
Subject: Fwd: FW: Acifluorfen acid forecast 2001

FYI

>From: "Chris McGee" [<mcgee@cvrtmail.com>](mailto:mcgee@cvrtmail.com)
>To: "mike reinsager" [<miker@cvrtmail.com>](mailto:miker@cvrtmail.com), "Jim Pirigy"
>[<ajpirigyjr@hotmail.com>](mailto:ajpirigyjr@hotmail.com), "Kevin Payne" [<kpayne@cvrtmail.com>](mailto:kpayne@cvrtmail.com),
> "Joe Mancini" [<jmancini@cvrtmail.com>](mailto:jmancini@cvrtmail.com), "Jim Rone" [<jrone@cvrtmail.com>](mailto:jrone@cvrtmail.com)
>Subject: FW: Acifluorfen acid forecast 2001
>Date: Mon, 13 Nov 2000 08:42:06 -0600

>FYI,

>Additional R-118118 is on its way, may be a little late but coming all the
>same.

>Chris

>-----Original Message-----

>From: Gregory Julian JA [<mailto:Julian.Gregory@agna.zeneca.com>]
>Sent: Wednesday, November 08, 2000 1:39 PM
>To: 'Chris McGee @ Cedar Chemical'; Gregory Julian JA; Walsh Shaun SH
>Subject: Acifluorfen acid forecast 2001

>Chris,

>Following up my voicemail of yesterday, I would like to get the latest on
>your equipment installation for the expansion and also to close out the
>letter amendment.

>Our expansion of R118 capacity is in place, although ramp up is a little
>behind plan due to the wide spread bad weather in the UK. However, you
>should be seeing increased rate of deliveries very shortly.

>Also as per the AA contract, I would like to confirm our 2001 acifluorfen
>acid requirements, inline with our discussions on increased offtake as:

>Q1 375tes 750,000
>Q2 375tes
>Q3 250tes - 500,000
>Q4 301tes 602,000

>Speak with you shortly

>Julian

5,204,000 LBS

11/13/00

AB0000028954

Shipped - 1824 x 640 = 200,640 LBS 91010kg

to ship - 304 = 33,440 LBS 15168kg

106,178
+ 4 Drums = 200kg
106378

invoiced: 60873kg ✓

to invoice ~~45305~~ kg
45,505kg

60873
45105
200
106178

106178
112664
64886kg

D-53488 MANDATZUSSEL

D-53488 MANDATZUSSEL

11/1

10.10.2001 02:42:22

degussa.**Fine Chemicals**

Degussa AG - Werk Löhndorf - D-53488 Mandatzensel

Zentrale Analytik Löhndorf
 D-53488 Mandatzensel
 Telephone: 02203 / 89-242
 FAX: 02203 / 89-402
 2001-10-18

FAX-No.: 02305494534

Greenhorn Inc.

220 Davidson Avenue
 08873 Somers N.J USA

Your order No. : 0202120

Purchase order No. : 00420000
 Delivery No. : 0040494005000010
 Lot-No. : 1101672
 Quantity : 20000 KG

01016230-1011100-1/1

Certificate of Analysis**Product: SODIUM METHYLATE SOLUTION 30%**

property	method	specification values	unit	value
Total alkalinity as NaOCH ₃	SOP 0627 (titrimetry)	29,5 - 31,0	mass-%	30,6
Total content of NaOH and Na ₂ CO ₃	SOP 0900 (Karl Fischer titration)	≤ 0,5	mass-%	0,2
Effective content sodium methylate	SOP 0627/066 (titrimetry)	29,5 - 30,5	mass-%	30,4

With these results of our inspections we certify that the material described above complies with the terms of the contract order.

Degussa AG

Fine Chemicals

signed Dr. Fortner
 Quality Inspection Manager

This certificate has been prepared with care and to the best of our knowledge in pursuance of the quality assurance system of Degussa AG. It is provided to our customers for information purposes only and does not release them obligation to perform proper incoming inspection upon receipt of the product. Furthermore, it is solely the customer's responsibility to determine the suitability of the product for its intended use. Degussa AG reserves the right to discontinue the product described herein fully meets its sales specification.

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Certificate of Analysis machine-made; valid without signature.

Page 1
 End

** TOTAL PAGE 02 **

AB0000028814

RAW MATERIAL RECEIVING RECORD

19608

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
1010

RECEIVED BY
D.W.

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
11/26/01	NA	CRXU8509841	Net NA 44268125

SHIPPER	CARRIER
Ovestis	Self States

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	8/c	units	NA	sodium methalate
				methalate
				methalate

COMMENTS
no C of A OK to enter by David Parker

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
<i>[Signature]</i>	

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS
Dropped on island.

SECTION 3

CAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>[Signature]</i>			

COMMENTS
C.H. QUALITY OF PRINT OUT IS POOR!

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS



NEW ORLEANS

DMH

DELIVERY RECEIPT

PHONE (504) 254-1400 DISPATCH NO.: A*110-061865-002-01
IMPORT

BILL TO AVENTIS CROP SCIENCE		DATE	APPT. 11/20/01 11:00
SHIPPER 15X R/R (NEW ORLEANS) 7801 ALMONASTER AVENUE MOBILE AL ORIGIN: NEW ORLEANS LA		CONSIGNEE - DESTINATION AVENTIS CROP SCIENCE % OFDAR CHEMICAL CORP 47 PHILLIPS ROAD, 1211 DEST: HELENA AR	
DRIVER'S NAME BERNARD J. JR., JAMES J.		TRUCK NO. 110662	WEIGHT
ARRIVAL TIME	DEPARTURE TIME	LABOR	START FINISH VERIFIED BY

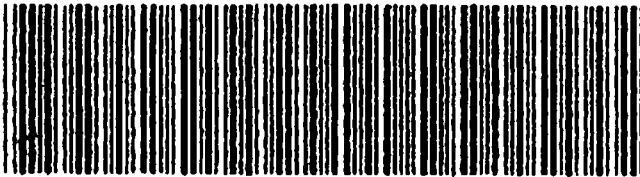
Container: MSU01142802 CD 20 Booking No.:
 Chassis: 1477260723 CH 20 Reference No.: 618340
 Vessel: MDC DIEGO VOY 127A No. of Pieces Received:
 Bill of Lading: MSU011084083 Seal No.:

Remarks:

RETURN EMPTY BTL:
 15X R/R (NEW ORLEANS)
 7801 ALMONASTER AVE

NEW ORLEANS LA

BERNARD J. JR. FOR DR
 (504) 244-4300



RECEIVED IN GOOD CONDITION EXCEPT AS OTHERWISE NOTED IN REMARKS

CUSTOMER SIGNATURE *Bernard J. Jr.* DATE

EQUIPMENT INSPECTION SECTION

CONTAINER NO.		CHASSIS NO.		USE THESE CODES TO SHOW CONDITION <input checked="" type="checkbox"/> BRUISE <input checked="" type="checkbox"/> BROKEN <input checked="" type="checkbox"/> CUT <input checked="" type="checkbox"/> DENT 4 <input checked="" type="checkbox"/> HOLE <input checked="" type="checkbox"/> MISSING									
MARK CONDITION BELOW CHECK BOX ONLY IF DAMAGED AND DESCRIBE IN REMARKS:										POSITION	BRAND/CONDITION	POSITION	BRAND/CONDITION
ROOF	UNDERSIDE	INSIDE	LEFT SIDE	FRONT	CHASSIS	REAR	RIGHT SIDE	TIRES		R.O. FRONT		L.O. FRONT	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		R.I. FRONT		L.I. FRONT	
LIGHTS	TARPS/CROSS BOWS									R.O. REAR		L.O. REAR	
REFLECTORS	BRAKES/GLANDS									R.I. REAR		L.I. REAR	
FLAPS	DOORS												
SAE 7	LANDING GEARS												

NOTE: By signing for and/or receiving this shipment consignee agrees to receiving in good order the freight, container, chassis, and/or trailer in which freight is delivered and agrees to take on all responsibility of container, chassis, and/or trailer, to include, but not limited to, any towing, storage, per diem, cleaning, sweeping, or repair charge incurred by delivering carrier while equipment is, or was, in consignee's possession. Consignee agrees to notify delivering carrier when equipment is empty and/or available for pick-up and give reasonable time for carrier to pick up equipment. Consignee agrees to pay any collection costs, charges, and/or attorney fees incurred by delivering carrier if carrier finds it necessary to collect on any charges billed to consignee.

SIGNATURE *cl*

OUR ORGANIZATION IS TOTALLY COMMITTED TO PROVIDE DEFECT-FREE SERVICE THAT MEETS, OR EXCEEDS, OUR CUSTOMERS' REQUIREMENTS, THE FIRST TIME, EVERY TIME.

AB0000028814



12

NEW ORLEANS
PHONE: (504) 254-1100

COPY

ORH

DELIVERY RECEIPT

DISPATCH NO.: **110-081865-001-01
IMPORT

BILL TO AVENTIS CROP SCIENCE		DATE	APPT. 11/20/01 06.00
SHIPPER CSX R/R (NEW ORLEANS) 7801 ALMONASTER AVENUE MOVE: <input checked="" type="checkbox"/>		CONSIGNEE - DESTINATION AVENTIS CROP SCIENCE % CEDAR CHEMICAL CORP 49 PHILLIPS ROAD, #311	
ORIGIN: NEW ORLEANS LA		DEST: HELENA AR	
DRIVER'S NAME CALLEGAS, JAMES, ROBERT		TRUCK NO. 110661	WEIGHT
ARRIVAL TIME	DEPARTURE TIME	LABOR	START FINISH VERIFIED BY

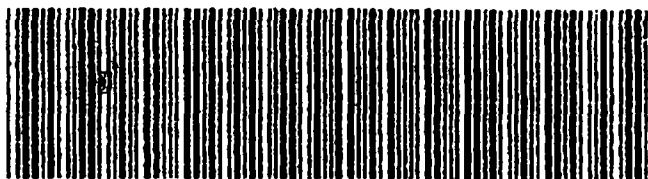
Container: MSCU1145643 CO 20 Booking No.:
Chassis: MSCV211773 CH 20 Reference No.: 618340
Vessel: MSC DIEGO JOY 1274 No. of Pieces Received:
Bill of Lading: MSCULH084083 Seal No.:

Remarks:

RETURN EMPTY RAIL TTD
CSX R/R (NEW ORLEANS)
7801 ALMONASTER AVE

NEW ORLEANS LA

BEN LORIO/GR RON DU
(504) 244-4333



RECEIVED IN GOOD CONDITION EXCEPT AS OTHERWISE NOTED IN REMARKS

CUSTOMER SIGNATURE <i>Bernie Jones</i>	DATE
---	------

EQUIPMENT INSPECTION SECTION

CONTAINER NO.		CHASSIS NO.		USE THESE CODES TO SHOW CONDITION <input type="checkbox"/> BRUISE <input type="checkbox"/> BROKEN <input type="checkbox"/> CUT <input type="checkbox"/> DENT <input type="checkbox"/> HOLE <input type="checkbox"/> MISSING									
MARK CONDITION BELOW. CHECK BOX ONLY IF DAMAGED AND DESCRIBE IN REMARKS:										POSITION	BRAND/CONDITION	POSITION	BRAND/CONDITION
ROOF	UNDERSIDE	INSIDE	LEFT SIDE	FRONT	CHASSIS	REAR	RIGHT SIDE	TIRES		R.O. FRONT		L.O. FRONT	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		R.I. FRONT		L.I. FRONT	
LIGHTS				TARPS/CROSS BOWS						R.O. REAR		L.O. REAR	
REFLECTORS				BRAKES/GLANDHANDS						R.I. REAR		L.I. REAR	
FLAPS				DOORS									
SAE 7				LANDING GEARS									

NOTE: By signing for and/or receiving this shipment consignee agrees to receiving in good order the freight, container, chassis, and/or trailer in which freight is delivered and agrees to take on all responsibility of container, chassis, and/or trailer, to include, but not limited to, any towing, storage, per diem, cleaning, sweeping, or repair charge incurred by delivering carrier while equipment is, or was, in consignee's possession. Consignee agrees to notify delivering carrier when equipment is empty and/or available for pick-up and give reasonable time for carrier to pick up equipment. Consignee agrees to pay any collection costs, charges, and/or attorney fees incurred by delivering carrier if carrier finds it necessary to collect on any charges billed to consignee.

SIGNATURE

OUR ORGANIZATION IS TOTALLY COMMITTED TO PROVIDE DEFECT-FREE SERVICE THAT MEETS, OR EXCEEDS, OUR CUSTOMERS' REQUIREMENTS, THE FIRST TIME, EVERY TIME.

AB0000028814

19. 2001 11/13/01
AVENTIS CROPS SCIENCE
2 T W ALEXANDER DR
RESEARCH TRIANGLE PARK, 27709

FAX: 11/13/01 1 0175

11/13/01 393543302 ECR

THE MERCHANDISE DESCRIBED BELOW
WILL BE ENTERED AND FORWARDED AS
FOLLOWS:

REPORTING CARRIER		127A		CSX		PORT OF ORIGIN/PORT	
MSC DIEGO						LE HAVRE, FRANCE	
DATE OF INVOICE		11/12/01		BTT TRUCKLINE		LOCAL DELIVERY OR TRANSFER BY (DELIVERY CARRIER SHOW YES)	
See Below							
				ENTRY NO.		DUTY NO.	
				336-3543302-4			
FOR DELIVERY TO				ROUTE			
AVENTIS CROPS SCIENCE USA LP L.F.D. C/O CEDAR CHEMICAL CORP. 49 PHILLIPS ROAD, # 311 HELENA, AR 72342				*** WILL ADVISE WHEN RELEASED *****			

NO. OF PKGS.	DESCRIPTION OF ARTICLES SPECIAL MARKS & EXCEPTIONS	WEIGHT	DO NOT USE
TK	2 2,4 DICHLORDANILINE # of Containers: 2 20 DRUMS MSCU1145643 20 - 52547549 20 DRUMS MSCU2142802 20 - 4208 SEND COLLECT FREIGHT BILL TO: AVENTIS CROPS SCIENCE USA LP C/O FREIGHT TRAFFIC SERVICES PO BOX 1259 SOMERVILLE, N.J. 08876 I V6000170938 M MSCU LH084083 Notify: LISA WALKER PH: 870-572-3701 References: FDN 618340 See attached for additional information SEAL H40077 3861175 - BTT	97003 22000 22000 TSX2 260723 260723	B

ORIGINAL DELIVERY ORDER

INLAND FREIGHT

PREPARE COLLECT
Collect

Received In Good Order

By: *Berni*

Danese AEI Customs Brokerage Services
Agents ~~For~~ Agents Only
AVENTIS CROPS SCIENCE

DELIVERY CLERK: DELIVER
TO CARRIER SHOWN ABOVE

AB0000028814



SHIPPING ORDER

must be legibly filled in, in ink, in indelible Pencil, or
in Carbon, and retained by the Agent

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply

CONSIGNEE:

AVENTIS CROPSOURCE USA
C/O CEDAR CHEMICAL CORPORATION
49 PHILLIPS RD #311
HELENA AR 72342
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Blackhawk Warehouse
407 Phillips 311 Road
Helena AR 72342
USA

B/L NO.

80120373

Page: 1 of 1

Date: November 19, 2001

CARRIER: ALT CARRIER - Black

VEHICLE NO.: 8541

FREIGHT CHARGES: Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

Carrier, Attach memorandum copy of Bill of Lading to Freight Bill and send

AVENTIS CROPSOURCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO.	HM	DESCRIPTION	CLASS	ID	P.G.	HAERG	WEIGHT
15600 Kilograms	130277		CDM DRMP 1X200KG 78.200kg drums To deliver Monday, November 19th. X COMBUSTIBLE LIQUID, NOS, COMBUSTIBLE LIQUID, UN1993, PGIII Lot# 2001-83V = 7 2001-64V/83V = 46 2001-182V = 1 2001-648V = 24 19p204 1p202 Benni Foyler					34,788 LB

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport

TOTAL SHIPPING UNITS

78d.

PLACARDS REQUIRED:**DECLARED VALUE OF SHIPMENT****PLACARDS SUPPLIED?**

☐ YES ☐ NO-FURNISHED BY CARRIER
☐ YES ☐ NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE

TOTAL WEIGHT

34,788 LB

C AMOUNT
O FEE
D TOTAL

Aventis
P.O. Box 12014
82 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

Date: 11-19-01

Date: 11-19-01

Shipper:

Carrier:

Consignee:

AB0000028814



SHIPPING ORDER

must be legibly filled in, in ink, in indelible Pencil, or in Carbon, and retained by the Agent

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described below in apparent good order, except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Domestic Straight Bill of Lading as set forth in the appropriate rail or motor classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA
C/O Wright Distribution Center
1000 Hawthorn Road
Troy OH 45894
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Wright Distribution Center
1000 Hawthorn Road
Troy OH 45894
USA

B/L NO.

80120376

Page:1 of 1

Date: November 15, 2001

VEHICLE NO: "DOYLE, BRANT"

FREIGHT CHARGES: Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-124-8000

SEAL NOS.

3784

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and send

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1250

QUANTITY	MATERIAL NO.	HM	DESCRIPTION	CLASS	ID	P.O.	WEIGHT
			DICHLORDANILINE SOLID MARINE POLLUTANT CHEMICALS, N.O.I. 2.4-DICHLOROANILINE 1X250KG DRUM Shipment Monday, November 19, 2001	6.1	UN1590	11	153
							35,840 35,840

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

TOTAL SHIPPING UNITS

64 Drums

PLACARDS REQUIRED:**DECLARED VALUE OF SHIPMENT****PLACARDS SUPPLIED?**

☒ YES

☐ NO-FURNISHED BY CARRIER

HAZARD SUPPLIED?

☐ YES

☒ NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE

TOTAL WEIGHT

35,840
~~35,840~~

C AMOUNT
O FEE
D TOTAL

Aventis
P.O. Box 12014
82 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

Date:

11-15-01

Date:

Signature

Shipper

Carrier

Consignee

AB0000028814

RAW MATERIAL RECEIVING RECORD № 19583

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE 0830		RECEIVED BY SR	
SECTION 1			
DATE 11-20-01	ORDER NO.	CAR OR TRUCK NO. 110662	DECLARED WEIGHT Net 48,000
SHIPPER BTT AVENTIS		CARRIER BTT 22046	
QUANTITY 48,000	CONTAINER MSCU214302	DESTINATION warehouse	DESCRIPTION 2.4 DCA
80 dls. @			
125 Kg ea.			
COMMENTS			
SECTION 2			
RECIPIENT Benni Jones		TIME SAMPLE/CERTIFICATE TAKEN TO LAB 9:55	
UNLOADED AT (tank number, unit, warehouse, etc.)			
COMMENTS			
SECTION 3			
LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
COMMENTS			
SECTION 4			
SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
PLANT WEIGHT NET 20,000 lbs.	UNLOADING TIMES		
	START TIME	END TIME	
COMMENTS			

AVENTIS CROPSCIENCE
2 T W ALEXANDER DR
RESEARCH TRIANGLE PARK, 27709

DATE
11/13/01

SHIP NO.
393543302 ECR

THE MERCHANDISE DESCRIBED BELOW
WILL BE ENTERED AND FORWARDED AS
FOLLOWS:

MSC DIEGO		127A	CSX	LE HAIRE, FRANCE	
See Below	11/12/01		BTT TRUCKLINE		
			336-3543302-4		
FOR DELIVERY TO			ROUTE		
AVENTIS CROPSCIENCE USA LP L.F.D. C/O CEDAR CHEMICAL CORP. 49 PHILLIPS ROAD, # 311 HELENA, AR 72342			*** WILL ADVISE WHEN RELEASE. *****		

NO. OF PKGS.	DESCRIPTION OF ARTICLES, SPECIAL MARKS & EXCEPTIONS	WEIGHT	DO NOT USE
TK	<p>2 2,4 DICHLOROANILINE</p> <p>N. of Containers: 2</p> <p>80 DRUMS MSCU1145643 20 - 52547549</p> <p>80 DRUMS MSCU2142802 20 - 4208</p> <p>SEND COLLECT FREIGHT BILL TO: AVENTIS CROPSCIENCE USA LP C/O FREIGHT TRAFFIC SERVICES PO BOX 1259 SOMERVILLE, N.J. 08876 I V6000170938 M MSCU LH084083 Notify: LISA WALKER PH: 870-572-3701</p> <p>Reference: POW 618340</p> <p><i>See attached for additional information</i></p> <p><i>Bennis Ford</i></p>	<p>97003 LB</p> <p>22000</p> <p>22000</p>	

ORIGINAL DELIVERY ORDER

INLAND FREIGHT

Freight Collect

Received in Good Order

By: *Bennis Ford*

Danzer ARI Customs Brokerage Services
Agents As Agents Only
AVENTIS CROPSCIENCE

DELIVERY CLERK: DELIVER
TO CARRIER SHOWN ABOVE

RAW MATERIAL RECEIVING RECORD № 19577

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE 11:30		RECEIVED BY JR	
SECTION 1			
DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
11-19-01	80120373	8541	Net 15,600 Kgs
SHIPPER Blackhawk		CARRIER Blackhawk	
QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #
15600 Kgs	8541	warehouse	
78 dno. @			
200kgs ea.			
COMMENTS			
SECTION 2			
RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB		
Benn Fox 2	11:45		
UNLOADED AT (tank number, unit, warehouse, etc.)			
COMMENTS			
SECTION 3			
LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
COMMENTS			
SECTION 4			
SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
PLANT WEIGHT	UNLOADING TIMES		
NET 15.603	START TIME	END TIME	
COMMENTS			

RAW MATERIAL RECEIVING RECORD № 19569

CEDAR CHEMICAL 9MMH-1 REV: C

TIME IN AT GATE 18:10	RECEIVED BY
--------------------------	-------------

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
------	-----------	------------------	-----------------

11-16-01	80120376	615	Net 35.840
----------	----------	-----	------------

SHIPPER M Wright Distribution	CARRIER Doyle Brent
----------------------------------	------------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
64 drums 250 Kg ea.	Trailer	Warehouse	NA	2-4 10-A

COMMENTS
NA COA ~~Guarantee~~ is warehouse

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
-----------	--------------------------------------

John Smith	
------------	--

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
----------------	--------	--------	----------------------

--	--	--	--

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
------------------	--------	--------	----------------------

--	--	--	--

PLANT WEIGHT	UNLOADING TIMES
--------------	-----------------

NET 35.264	START TIME	END TIME
------------	------------	----------

COMMENTS

SNPE Chimie
GROUPE SNPE

Argues : + 33 4 90 33 62 00 - Fax : + 33 4 90 33 63 26
Toulouse : + 33 5 62 25 72 00 - Fax : + 33 5 62 25 72 15
B.P. 4422 - 31405 Toulouse cedex

DESTINATAIRE FINAL / Delivery address

AVENTIS CROPS SCIENCE USA 2
C/O NSY WAREHOUSE
8921 FROST AVENUE
BERKELEY, MO
63134 U.S.A

CERTIFICAT D'ANALYSE
Certificate of Analysis

N° ARC / Our ref.	N° FACTURE / Invoice	Date PAGE
LIV 652 2		05-10-01 1
REF. CLIENT / Your ref.		N° BL / Delivery List
40158031		11131

Document adressé à l'attention de : ADRESSE DE FACTURATION / Invoice address

AVENTIS CROPS SCIENCE S.A.
14-20 RUE PIERRE BAIZET

69263 LYON CEDEX 09

CODE ARTICLE CLIENT / DESCRIPTION / CONDITIONNEMENT / N° DES LOTS
Your article n° / Description / Packaging / Batch number

2/4 DICHLOROANILINE pour cycle Weight Net/Brut 20000,00 / 22000,00

80 STEEL DRUM(S) 250
enlèvement client MSCU 114564-3

Lot/Batch 2001/54 CARACTERISTIC	Poids Net/Brut Weight Net/Gross UNITY	9000,00 / 9900,00		ACTUAL
		MIN.	MAX.	
molten product colourless to brow U		YES	YES	YES
visuel				
2,4-dichloroaniline	%	99,0	100,0	99,9
To 10.61.98				
2,5-dichloroaniline	%	0,00	0,20	0,06
To 10.61.98				
2,6-dichloroaniline	%	0,00	0,10	0,00
To 10.61.98				
3,4-dichloroaniline	%	0,00	0,10	0,05
To 10.61.98				
others impurities, sum (a)+(b)+(c)	%	0,00	0,30	0,06
chlorides	PPM	0	100	10
To 05.14.90				
water	%	0,00	0,10	0,01
To 09.11.88				
Solidification point	°C	60,0	0,0	60,0

Lot/Batch 2001/55 CARACTERISTIC	Poids Net/Brut Weight Net/Gross UNITY	11000,00 / 12100,00		ACTUAL
		MIN.	MAX.	
molten product colourless to brow U		YES	YES	YES
visuel				
2,4-dichloroaniline	%	99,0	100,0	99,8
To 10.61.98				
2,5-dichloroaniline	%	0,00	0,20	0,06
To 10.61.98				
2,6-dichloroaniline	%	0,00	0,10	0,00
To 10.61.98				
3,4-dichloroaniline	%	0,00	0,10	0,06

Les valeurs ci-dessus sont le résultat des analyses effectuées à notre usine. Compétentes à titre indicatif à votre clientèle, elles ne sauraient constituer une garantie en vue d'une utilisation courante du produit. La communication de ces valeurs ne libère pas notre clientèle de son propre contrôle de qualité à réception du produit.

The values above are the result of analyses carried out at our plant. They are given as an indication to our customers and should not, moreover be used as a guarantee vis-à-vis precise usage of the product. These values should not be used on their own, and you should in all cases carry out your own analytical test upon receipt of the product.

NPE chimie

GROUPE SNPE

Tél : + 33 4 90 33 62 00 - Fax : + 33 4 90 33 63 26
 Tél : + 33 5 62 25 72 00 - Fax : + 33 5 62 25 72 15
 4422 - 31405 Toulouse cedex

DESTINATAIRE FINAL / Delivery address

AVENTIS CROPSCIENCE USA 2
 C/O NSY WAREHOUSE
 8921 FROST AVENUE
 BERKELEY, MO
 63134 U.S.A

CERTIFICAT D'ANALYSE

Certificate of Analysis

N° ARC / Our ref.	N° FACTURE / Invoice	Date PAGE
LIV 653 2		05-10-01 2
REF. CLIENT / Your ref.	N° BL / Delivery list	
40158031	11131	

Document adressé à l'attention de : ADRESSE DE FACTURATION / Invoice address

AVENTIS CROPSCIENCE S.A.
 14-20 RUE HIERE BAIZET

69263 LYON CEDEX 09

ODE ARTICLE CLIENT / DESCRIPTION / CONDITIONNEMENT / N° DES LOTS
Our article n° / Description / Packaging / Batch number

To 10.61.98			
others impurities, sum (a)+(b)+(c) %	0,00	0,30	0,09
chlorides PPM	0	100	7
To 05.14.90			
water %	0,00	0,10	0,03
To 09.11.88			
Solidification point °C	60,0	0,0	61,0

Ce certificat ayant été réalisé par traitement informatique, sa signature est facultative.

This certificate has been made by electronic dataprocessing and is therefore not necessarily signed.

Les valeurs ci-dessus sont le résultat des analyses effectuées à notre usine. Communiquées à titre indicatif à notre clientèle, elles ne sauraient constituer une garantie en vue d'une utilisation concrète du produit. La communication de ces valeurs ne libère pas notre clientèle de ses propres contrôles de qualité à réception du produit.

The values above are the result of analyses carried out at our plant. They are given as an indication to our customers and should not, moreover be used as a guarantee vis-à-vis precise usage of the product. These values should not be used on their own, and you should at all times carry out your own analytical test upon receipt of the product.

NPE - Siège Social : 12, quai Henri - IV - 75181 PARIS CEDEX 04 - France - S.A. au capital de 368 407 800 F - N° 14- FR 10 712 017 432


CERTIFICAT D'ANALYSE
Certificate of Analysis

N° ARC / Our ref.	N° FACTURE / Invoice	DATE PAGE
LTV 651 1		05-10-01 1
REF. CLIENT / Your ref.	N° BL / Delivery Let	
40158031	11130	

Argues : + 33 4 90 33 62 00 - Fax : + 33 4 90 33 63 26
 Toulouse : + 33 5 62 25 72 00 - Fax : + 33 5 62 25 72 15
 P. 4422 - 31405 Toulouse cedex

ESTIMATAIRE FINAL / Delivery address

AVENTIS CROPSCIENCE USA 2
 C/O NSY WAREHOUSE
 8921 FROST AVENUE
 BERKELEY.MD
 63134 U.S.A

Documents adressés à l'attention de : ADRESSE DE FACTURATION / Invoice address

AVENTIS CROPSCIENCE S.A.
 14-20 RUE PIERRE BAIZET

69263 LYON CEDEX 09

306 ARTICLE CLIENT / DESCRIPTION / CONDITIONNEMENT N° DES LOTS
 sur avis n° / Description / Packaging / Batch number

2/4 DICHLOROANILINE pour cyclo Poids Net/Brut Weight Net/Gross 20000,00 / 22000,00

80 STEEL DRUM(S) 250
 enlèvement client CNC

Lot/Batch 2001/55 CARACTERISTIC	Poids Net/Brut Weight Net/Gross UNITY	3000,00 / 3300,00 MIN. MAX.	ACTUAL
molten product colourless to brow U visuel		YES YES	YES
2,4-dichloroaniline To 10.61.98	%	99,0 100,0	99,8
2,5-dichloroaniline To 10.51.98	%	0,00 0,20	0,06
2,6-dichloroaniline To 10.61.98	%	0,00 0,10	0,00
3,4-dichloroaniline To 10.61.98	%	0,00 0,10	0,06
others impurities, sum (a)+(b)+(c) chlorides	% PPM	0,00 0,30 0 100	0,09 7
To 05.14.90			
water	%	0,00 0,10	0,03
To 09.11.88			
Solidification point	°C	60,0 0,0	61,0

Lot/Batch 2001/56 CARACTERISTIC	Poids Net/Brut Weight Net/Gross UNITY	17000,00 / 18700,00 MIN. MAX.	ACTUAL
molten product colourless to brow U visuel		YES YES	YES
2,4-dichloroaniline To 10.61.98	%	99,0 100,0	99,8
2,5-dichloroaniline To 10.61.98	%	0,00 0,20	0,06
2,6-dichloroaniline To 10.61.98	%	0,00 0,10	0,00
3,4-dichloroaniline	%	0,00 0,10	0,06

Les valeurs ci-dessus sont le résultat des analyses effectuées à notre usine. Communiquées à titre indicatif à nos clients, elles ne sauraient constituer une garantie en vue d'une utilisation concrète du produit. La communication de ces valeurs ne libère pas notre clientèle de ses propres contrôles de qualité à réception du produit.

The values above are the result of analyses carried out in our plant. They are given to an indication to our customers and should not, however be used as a guarantee vis-à-vis precise usage of the product. These values should not be used on their own, and you should in all cases carry out your own analyses on upon receipt of the product.

SNPE Chimie

GROUPE SNPE

Argues : + 33 4 90 33 62 00 - Fax : + 33 4 90 33 63 26
 Toulouse : + 33 5 62 25 72 00 - Fax : + 33 5 62 25 72 19
 .P. 4422 - 31405 Toulouse cedex

CERTIFICAT D'ANALYSE

Certificate of Analysis

N° ABC / Our ref.	N° FACTURE / Invoice	Date	PAGE
LIV 661 1		05-10-01	2
REF. CLIENT / Your ref.		N° BL / Delivery List	
40158031		11130	

DESTINATAIRE FINAL / Delivery address

AVENTIS CROPSCIENCE USA 2
 C/O NSY WAREHOUSE
 8921 FROST AVENUE
 BERKELEY.MO
 63134 U.S.A

Document adressé à l'attention de : ADRESSE DE FACTURATION / Invoice address

AVENTIS CROPSCIENCE S.A.
 14-20 RUE PIERRE BAIZET

69263 LYON CEDEX 09

IDE ARTICLE CLIENT / DESCRIPTION / CONDITIONNEMENT / N° DES LOTS
 or article n° / Description / Packaging / Batch number

To 10.61.98			
others impurities, sum (a)+(b)+(c) %	0,00	0,30	0,09
chlorides PPM	0	100	7
To 05.14.90			
water %	0,00	0,10	0,03
To 09.11.88			
Solidification point °C	60,0	0,0	61,0

Ce certificat ayant été réalisé par traitement informatique, sa signature est facultative.

This certificate has been made by electronic dataprocessing and is therefore not necessarily signed.

Les résultats sont le résultat des analyses effectuées à notre usine. Communiqués à titre indicatif à notre clientèle, elles ne sauraient constituer une garantie en tant qu'usage de conseil de produit. La communication de ces valeurs ne libère pas notre clientèle de son propre contrôle de qualité à réception de produit.

Our above are the result of analyses carried out at our plant. They are given as an indication to our customers and should not, moreover be used as a guarantee vis-à-vis usage of the product. These values should not be used on their own, and you should at all times carry out your own analytical use upon receipt of the product.

Agro Social - 12, quai Henri - IV - 75101 PARIS CEDEX 04 - France - S.A. au capital de 368 407 800 F - N° id. PR 10 712 013 432

AB0000028814

TETRA Technologies, Inc.

Fluids Division - Bromine & Derivatives

25025 I-45 North, The Woodlands, Texas 77380

P.O. Box 73087, Houston, Texas 77273



FACSIMILE COVER SHEET

Date:	September 12, 2001	Pages to Follow:	1
To:	Lisa Walker	Fax No:	(870) 572-3795
From:	Art Patterson	Contact Phone No:	(281) 364-4358
Contact Name:		Fax No:	(281) 298-6217

Remarks:

Lisa,

Attached is a bill of lading for one drum of B53P. Please release it to the trucking company that calls to schedule the pick-up. Freight is being arranged by PLESS.

Thanks,

Art Patterson

Privileged and Confidential

This transmission (including all attached pages) is intended only for the use of the named recipient(s), and may contain information that is privileged or exempt from disclosure under applicable law. If you are not a named recipient, you are hereby notified that any use, dissemination, distribution, or copying of this transmission is strictly prohibited. If you have received this transmission in error, please destroy all copies and notify us immediately.

AB0000028814

PACKING SLIP

JOB NUMBER: 216518 DATE: 09-07-01

CUSTOMER: AVENTIS CROPS SCIENCE SHIP TO:

ATTN: CEDAR CHEMICAL CORP. 646
49 PHILLIPS ROAD #311

DURHAM NC HELENA AR
27709 72342

P.O. NUMBER: 643324

THIS SHIPMENT CONTAINS

2175 CYCLANILIDE 50 KG DRUM LABEL
ACS 23994A/3100 12/00

1 CTN @ 2175

SEP 11 2001

2175

TOTAL = 2175

WRITTEN BY: JL
PACKED BY: XX
SHIPPED BY: A. FREIGHTWAYS
RECEIVED BY: *James Park*

PRINTING COMPANY, INC.
P.O. Box 1167 / Lexington, N.C.

RECEIVED BY

Freight Bill # 067035883 RC TNBR#:		CONSIGNEE CEDAR CHEMICAL 49 PHILLIPS RD 311 HWY 242 HELENA AR 72342		SHIPPER GREEN PRINTING CO INC 101 LEXINGTON PKY LEXINGTON NC 27295				
Date: 09/07/2001								
H/U	PCS	HM	DESCRIPTION	WGT-LBS	NMFC	PCF CLASS	RATE	CHARGES
	1		PO# NS PRINTED MATTER 000150 FUEL SURCHG LTL SHPT3.00% ** FAK RATES APPLIED **	139	161870-00	070		
1	1		PREPAID - WILL INVOICE THIRD PARTY	139				
ANY ADDITIONAL SERVICES MAY RESULT IN ADDITIONAL CHARGES* CHARGES SUBJECT TO CHANGE*								B/L # NS
								0.00

PACKING SLIP

JOB NUMBER: 216231

DATE: 08-29-01

CUSTOMER:

SHIP TO:

AVENTIS CROPS SCIENCE
ATTN:

CEDAR CHEMICAL CORP. 640
49 PHILLIPS ROAD #311

DURHAM NC
27709

HELENA AR
72342

P.O. NUMBER: 643324

THIS SHIPMENT CONTAINS

2200 CYCLANILIDE 50KG DRUM LABEL
ACS 123499A/3100 12/00

2 CTNS @ 1025 / 1 CTN @ 150 2200

SEP 4 2001

TOTAL = 2200

WRITTEN BY: JL
PACKED BY: XX
SHIPPED BY: UPS
RECEIVED BY: _____

Green

PRINTING COMPANY, INC.
P. O. Box 1167 / Lexington, N. C



FACSIMILE TRANSMITTAL SHEET

TO:	FROM:
Lisa Walker	Craig Dodson (craig.dodson@aventis.com)
COMPANY:	DATE:
Cedar	August 20, 2001
FAX NUMBER:	TOTAL NO. OF PAGES INCLUDING COVER
(870) 572-3795	2
PHONE NUMBER:	SENDER'S FAX NUMBER:
(870) 572-3701	(919) 549-2200
RE:	SENDER'S PHONE NUMBER:
Cyclanilide STO's	(919) 549-2017

☐ URGENT ☐ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS:

Lisa,

Here is the back up from RTP, St. Louis Plant, NSY Warehouse and Savannah. The numbers add up to 2,258 drums or 112,900 kgs. Please check your production numbers.

Thanks,
Craig

P. O. BOX 12014
RESEARCH TRIANGLE PARK NC 27709

AB0000028814

US82 - STL (formulator) VM

5/8 80096435 3drm
 6/14 80104459 130
 6/14 80104460 130
 7/16 80109215 130

393 drm =
 19,650 kg

393

USB9 - NSY (whse)

6/19 80105389 130 drm
 6/19 80105390 130
 6/19 80105393 130
 6/19 80105394 130
 6/19 80105391 130
 6/19 80105392 130
 6/28 80107047 130
 57/16 80109216 130
 7/20 80110040 130
 7/20 80110039 130
 7/20 80110038 130
 7/20 80110037 130
 7/26 80110888 130
 7/26 80110887 130

will call
 back w/#
 1,734 ✓

USC1 - (RICK) OR DONNA Savannah

7/26 80110886 130 drm OK ✓
 = 6,500 kg

1734 ~~1020~~ drm =
 86,700 ~~21,000~~ kg

RTP

5/9 80096083 1 dram
 = 50 kg

1734
 393
 130
 1
 2258 drms = 112,900 kg



STRAIGHT BILL OF LADING - SHORT FORM

Received, subject to all terms and conditions of the contract in effect between shipper and Carrier on the date of issue of this Bill of Lading, the property described herein in apparent good order except as noted. In the event no contract is in effect, the Terms and Conditions of the Uniform Composite Straight Bill of Lading as set forth in the appropriate red or white classification shall apply.

CONSIGNEE:

AVENTIS CROPSCIENCE USA LP
% WRIGHT DISTRIBUTION CENTER INC
1-75 EXIT 122
1000 HANTHORN RD
LIMA OH 45804
USA

CONSIGNOR (SHIPPER):

Aventis CropScience USA LLP
c/o Cedar Chemical Corporation
49 Phillips Road #311
Helena AR 72342
USA

B/L NO.

80098430

Page: 1 of 1

Date: May 09, 2001
CARRIER: ATS INC

VEHICLE NO.:

FREIGHT CHARGES: Prepaid

24 HOUR EMERGENCY TELEPHONE NUMBER:

1-800-424-9300

SEAL NOS.

Carrier: Attach memorandum copy of Bill of Lading to Freight Bill and air

AVENTIS CROPSCIENCE C/O FTS
C/O FTS FREIGHT PAYMENT PLAN
P. O. BOX 1259
SOMERVILLE NJ 08876-1259

QUANTITY	MATERIAL NO. / TMS	DESCRIPTION	CLASS	ID	P.C.	HAZAR	WEIGHT
72 Drums	109671	X DICHLORDANILINE, SOLID RD(2,4-DICHLORDANILINE) MARINE POLLUTANT INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON 2,4-DCA (2,4-DICHLORDANILINE) 1x200kg net	6.1	UN1590	II	153	31,746 LBS

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transport.

TOTAL SHIPPING UNITS**PLACARDS REQUIRED:****DECLARED VALUE OF SHIPMENT****PLACARDS SUPPLIED:**

☐ YES ☐ NO-FURNISHED BY CARRIER
☐ YES ☐ NO-FURNISHED BY CARRIER

DRIVER'S SIGNATURE _____

TOTAL WEIGHT

18,720 LB

Aventis
P.O. Box 12014
62 T.W. Alexander Drive
Research Triangle Park, North Carolina 27709

☐ AMOUNT
☐ PER
☐ TOTAL

Date: _____

Date: _____

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S
67	Aromatic B	40800	2.4900								C	188	5685		S	719	1460	
68																		
69	Arrosolo	3170									S	894	1420		C	132	6740	
70	P Tech	3000									C	132	6810		S	702	1420	
71	Ordram																	
72	Wit Emul	40810									C	132	5670		S	829	1460	
73	Aromatic B	40800									C	132	5685		S	719	1460	
74																		
75	Molinate 72(6#)	3100									S	885	1420		C	158	6740	
76	Molinate Tech	41760									C	156	5715		S	828	1460	
77	Wit Emulsifier	40810									C	156	5670		S	829	1460	
78	Aromatic B	40800									C	156	5685		S	719	1460	
79																		
80																		
81		Item No	Std	Usage	Raw	Used	Finish Goods											
82			Factor	Factor	Materials		Pkg'd	Mfg'd							Dr			Cr
83	Stam	3400						114,557			S	811	1420	902,709.16	C	170	6740	(902,709.16)
84	P Tech	3000	4.1270	4.1561		478,110					C	170	6810	604,659.70	S	702	1420	(604,659.70)
85	F Tech	3050									C	170	6835		S	804	1420	
86	Isoph/Milk	41080	3.9280	3.9083	447,720						C	170	5780	232,814.40	S	721	1460	(232,814.40)
87	Emul	40600	0.8030	0.8954	102,560						C	170	5670	71,806.00	S	718	1460	(71,806.00)
88	Isoph	40500									C	170	5680		S	717	1460	
89	MO	40400									C	170	5660		S	716	1460	
90																		
91		Item Description	Item No			Total Qty's												
92						R/M's	F/G's											
93		Propanil Tech	3000				1,014,610											
94		Flake Tech	3050															
95		M O	40400															
96		Isoph	40500															
97		Emul	40800		102,560													
98		Emul C6173	40810															
99		Aromatic B	40800															
100		Amul	40900															
101		Isoph/Milk	41080		447,720													
102		Sun Oil	41640															
103		Molinate	41760															
104		Tenneco 500	45320															
105		Ordram																
106																		
107	3# Packaged:	Item No				Mt Drms	Bulk	Full Drms										
108	3# 50L	3190	13.210								S	854	1420		C	167	6740	
109	3# 55's	3210	55.000								S	806	1420					
110	3# 200L's	3250	52.840								S	807	1420					
111	Propanil 360 210L's	10020	55.480								S	828	1420					
112	3# Bulk	3200									C	167	6820		S	802	1420	
113	3# 20L Used	3220													S	819	1420	
114	3# 200L Used	3250													S	807	1420	
115	35's	42210									C	1067	5890		S	738	1460	
116	55M's	42300													S	742	1460	
117	65 Mt's Black	42550													S	756	1460	
118	3# 20L	3220	5.280								S	819	1420		C	160	6740	
119	3# Bulk	3200									C	160	6820		S	802	1420	
120	Mt 20L	42000									C	1060	5890		S	739	1460	
121	4# Packaged:	Item No				Mt Drms	Bulk	Full Drms										
122	Propanil 4# 20L	3290	5.280								S	812	1420		C	169	6740	
123	4# 55's	3310	55.000								S	818	1420					
124	Propanil 4# 210L	3320	55.480								S	838	1420					
125	Propanil 4# 200L	3330	52.840								S	839	1420					
126	Cedar Blue Drum 35 gal	3340	35.000								S	814	1420					
127	4# bulk	3300									C	169	6830		S	817	1420	
128	35 m's	42210									C	1069	5890		S	738	1460	
129	Mt 20L	42000													S	739	1460	
130	35 m's Plastic	42230													S	783	1460	
131	55 m's	42300													S	742	1460	
132	55 m's	42550													S	756	1460	
133	Stam Packaged:	Item No				Mt Drms	Bulk Used	Full Drms										

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S	
265	Flake Tech 25Kg Used	3080									C	184	6835		S	822	1420		
266	Morwet	41460	0.0970								C	184	5850		S	726	1460		
267	Polyfon O	41470	0.0100												S	727	1460		
268	Glycerine	41480	0.2430												S	728	1460		
269	Kelzan	41510	0.0050												S	761	1460		
270	Veegum	41570	0.1170												S	731	1460		
271	Technical Cerbyl	41670	0.0070												S	767	1460		
272	Ethephon	41680	0.0400												S	791	1460		
273	Soprophor 4D384	41690	0.1460												S	809	1460		
274	Glutaraldehyde	41750													S	827	1460		
275	Antifoam DC 1500	45140	0.0010												S	785	1460		
276	Alfonio	41490	0.3890												S	729	1460		
277	Proxel	41730													S	825	1460		
278	Formaldehyde																		
279	Citric Acid	41590													S	767	1460		
280	30 m's	42100									C	184	5870		S	752	1460		
281	30 m's @ Pachuta	42100													S	752	1460		
282	2.5 m's	44200													S	759	1460		
283	Dust Packaged:	Item No	Std	Act	R/M's	F/G's	Cases/Drums	Gals/Lbs											
284	Dust 30	3430									S	823	1420		C	159	6740		
285	Dust 2x10L	3390									S	888	1420						
286	Flaked Tech	3050									C	159	6835		S	804	1420		
287	Flake Tech 25Kg Used	3060													S	822	1420		
288	Morwet	41480									C	159	5850		S	726	1460		
289	Polyfon O	41470													S	727	1460		
290	Glycerine	41480													S	728	1460		
291	Kelzan	41510													S	761	1460		
292	Veegum	41570													S	731	1460		
293	Ethephon	41680													S	791	1460		
294	Soprophor	41690													S	809	1460		
295	Glutaraldehyde	41750																	
296	Antifoam	45140													S	785	1460		
297	Bensulfuron Methyl Tech																		
298	Proxel	41730													S	825	1460		
299	Formaldehyde																		
300	30 m's	42100									C	159	5870		S	752	1460		
301	Total Flaked Tech Used	3050																	
302	Sutan+0.7E Produced & Packaged:																		
303	Sutan 2x2.5	3550									S	877	1420		C	135	6740		
304	Bulylate Tech	46230									C	135	5850		S	838	1460		
305	Kerosene	46270													S	840	1460		
306	Dichloromd (kg)	46120													S	833	1460		
307	AU-868	46260													S	839	1460		
308	2.5 gal jug																		
309		Item No	Std	Act	R/M's	F/G's	Cases/Drums	Gals/Lbs											
310	Repose/Repose T Produced & Packaged:																		
311	Repose 2x2.5	3630									S	878	1420		C	140	6740		
312	Repose T 2x2.5	3690									S	898	1420		C	140	6740		
313	Repose T bulk gl	3820						1,515			S	915	1420	28,573.10	C	140	6740	(28,573.10)	
314	Aromatic 200	46280			12,054						C	140	5850	5,348.43		S	844	1460	(3,254.58)
315	Pendarmethalin	3110				9,240					C	140	6857	30,030.00		S	857	1420	(30,030.00)
316	AU-545	46310			1,619										S	846	1460	(2,091.85)	
317	2.5 gal jug																		
318	Shroud Produced & Packaged:																		
319	Shroud 2x2.5	3680									S	897	1420		C	142	6740		
320	Aromatic 200	46280									C	142	5850		S	844	1460		
321	Monochlor Tautane	46280													S	843	1460		
322	AU-567 Emulsifier	46300													S	845	1460		
323	Alachlor Tech	3540									C	142	6858		S	882	1420		
324	2.5 gal jug																		
325	Ro-Neet Produced:																		
326	Ro-Neet	3490									S	875	1420		C	490	6740		
327	Cycloate Tech	3840									C	490	6859		S	880	1420		
328	Cycloate Tech 200 kg	3520													S	879	1420		
329	Sporto 221ER	41780									C	490	5850		S	841	1460		
330	Kerosene	46270													S	840	1460		

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S
859																		
860																		
861																		
862																		
863																		
864																		
865																		
866	Finish Goods Standards:																	
867	Product	Item No	Unit	Per Unit														
868	Propanil Tech Bulk	3000	lbs	1.27														
869	DCA 550 lb	3010	lbs	1.53														
870	DCA-Cedar	3020	lbs	1.48														
871	Diuron	3030	lbs	2.24														
872	Diuron B Grade	3040	lbs	2.24														
873	Flaked Tech	3050	lbs	1.31														
874	Flaked Tech 25Kg	3060	kg	3.16														
875	Diuron Col 224 Kg	3070	kg															
876	RiceSolo 30 Gal	3080	gls	6.41														
877	RiceCue 500 lbs	3090	lbs	.74														
878	Molinate 72 (6#)	3100	lbs	4.95														
879	Pendimethalin	3110	lbs	3.25														
880	EPTC 7C	3120	gls	13.60														
881	RiceSolo Bulk	3130	gls	6.41														
882	DCH 550 lbs	3140	lbs	2.65														
883	Molinate 72 Bulk	3150	gls	4.95														
884	DCA 250 Kg	3160	kg	3.26														
885	Amrosolo	3170	gls	6.41														
886	Wham! EZ 2x2.5 Gal	3180	gls	9.03														
887	3# 50 Liter	3190	Lt	2.67														
888	Propanil 3# bulk	3200	gls	7.93														
889	Propanil 3# 55 gal	3210	gls	10.08														
890	Propanil 3# 20L	3220	Lt	2.67														
891	Wham 100 Liter	3230	Lt	2.32														
892	Wham 30 gal	3240	gls	9.03														
893	Propanil 3# 200L	3250	Lt	2.67														
894	Wham 5 gal	3260	gls	9.03														
895	RiceCue 1500 lbs	3270	lbs	.74														
896	2,4 d-b Acid 25 kg	3280	kg	6.39														
897	Propanil 4# 20L	3290	Lt	2.67														
898	Propanil 4# Bulk	3300	gls	7.93														
899	Propanil 4# 55 gal	3310	gls	10.08														
900	Propanil 4# 210 L	3320	Lt	2.67														
901	Propanil 4# 200L	3330	Lt	2.67														
902	Propanil 4# 35 gal	3340	gls	10.08														
903	Super Wham! 30 gal	3350	gls	9.03														
904	Super Wham! 2x2.5 Gal	3360	gls	9.03														
905	Super Wham! Bulk	3370	gls	9.03														
906	Wham Ez 2x10L	3380	lt	2.32														
907	Duet 2x10L	3390	lt	2.26														
908	Stam Bulk	3400	gls	7.88														
909	Amrosolo 30 Gal	3410	gls	7.01														
910	Stam 35 gal	3420	gls	8.82														
911	Duet 30 gal	3430	gls	8.54														
912	2,4 D-B Acid 750 kg	3440	kg	6.39														
913	Ro-Neet 20L	3450	kg	4.60														
914	EPTC 200 Kg	3460	kg	2.68														
915	EPTC Tech Bulk	3470	lbs	1.08														
916	Ro-Neet Tech	3480	lbs	1.49														
917	Ro-Neet Bulk	3490	gls	14.50														
918	Ro-Neet 2x2.5	3500	gls	14.50														
919	Cycloate Tech 200 Kg	3520	kg	3.90														
920		3530		1.77														
921	Alachlor	3540	kg	3.80														
922	Sutan 2x2.5	3550	gls	17.87														
923	Eradicane - USA 2x2.5	3560	gls	15.92														
924	Eradicane -ROW 2x2.5	3570	gls	10.82														

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S
925	Eptam	3580	lt	2.60														
926	Tillam 2x2.5	3590	gls	15.79														
927		3600		9.00														
928		3610		30.00														
929	Eradicane 8E Bulk	3620	ltr	2.89														
930	Repose 2x2.5	3630	gls	18.04														
931	Cycloste Bulk	3640	lbs	1.49														
932	Tillam 200L	3650	lt	3.50														
933	RoNeel Tech Bulk Ltrs	3660	ltre	3.90														
934	Roneet 4x5lt	3670	ltr	4.60														
935	Shroud 2x2.5 gal	3680	gls	11.36														
936	Repose T 2x2.5 gals	3690	gls	18.04														
937	Tillam Tech	3700	gls	12.47														
938	Eradicane 6.7E Bulk gls	3710	gls	15.92														
939	Eradicane 8E 2x10Ltr	3720	ltr	3.00														
940	Eradicane 8E Bulk	3730	ltr	3.00														
941	EPTC Tech Bulk	3740	kg	2.66														
942	DCPI Bulk Lbs	3750	lbs	2.61														
943	DCPI Bulk Kg	3760	kg	5.38														
944	Duron 450 Kg	3770	kg	4.94														
945	Dichlorimid Tech bulk kg	3780	kg	9.50														
946	Eradicane 6.7E 20 ltr	3780	ltr	3.28														
947	Eradicane 6.7E 200ltr	3800	ltr	3.28														
948	Eradicane 6.7E Bulkltr	3810	ltr	3.28														
949	Repose Bulk Gals	3820	gls	17.54														
950	Tham	5340	lbs	4.30														
951	Finish Goods Standards (cont'd):																	
952	Propanil 360 210 L	10020	Li	2.67														
953	Support	15010	lbs	13.71														
954	Fluometron Tech	15020	kg	9.08														
955	2,4 d-b Acid	15100	lbs	2.80														
956	Butox 200 Bulk	15200	gls	10.25														
957	Butox 175 (15240/15260/15270	15240	gls	11.22														
958	Butox 200 (15230/40/60/70)	15570	gls	12.82	10.03													
959	Butoxone 7500 DF	15580	Bag	13.71														
960	Butoxone 7500 DF	15590	Bulk	4.94														
961	Elhephon	15740	lbs	1.24														
962	Tromethamine Bulk	17000	lbs	4.30														
963	Tham 25 Kg	17020	kg	9.63	4.37	lb												
964	Pure Tromethamine 25 Kg	17120	kg	9.63	4.37	lb												
965	Tromethamine 50#	17130	lbs	4.30														
966	Trometomal 25 kg	17220	kg	9.63	4.37	lb												
967	Pure Tromethamine 50 Kg	17230	kg	9.63	4.37	lb												
968	Tromethamol 50 Kg	17240	kg	9.63	4.37	lb												
969	Tris Ultra Pure 100 Kg	17250	kg	9.63	4.37	lb												
970	Pure Tris-Hcl 100 Kg	17260	kg	9.63	4.37	lb												
971	Tris Ultra Pure 25 Kg	17270	kg	14.00	6.35	lb												
972	Tris Hydrochloride 25 kg	17280	kg	14.63	6.64	lb												
973	Tris Hcl Bulk	17280	lbs	6.57	2.98	lb												
974	Tris UltraPure Bulk	17350	lbs	14.63	6.64	lb												
975	2AB bulk kg	17380	kg	13.51	6.13	lb												
976	Hepes 25kg	17410	kg	31.50	14.29	lb												
977	Hepes NA 25kg	17420	kg	35.00	15.88	lb												
978	Mes 25kg	17430	kg	30.00	13.61	lb												
979	Mes NA 25kg	17440	kg	35.00	15.88	lb												
980	Pipes 25kg	17450	kg	30.00	13.61	lb												
981	Pipes NA 25kg	17460	kg	35.00	15.88	lb												
982	Hepes Bulk	17470	kg	31.50	14.29	lb												
983	Hepes NA Bulk	17480	kg	35.00	15.88	lb												
984	MES Bulk	17490	kg	30.00	13.61	lb												
985	MES NA Bulk	17500	kg	35.00	15.88	lb												
986	Pipes Bulk	17510	kg	30.00	13.61	lb												
987	Pipes Esquisodium Bulk	17520	kg	35.00	15.88	lb												
988																		
989	R/M's Standard:																	
990	Product	Item No	Unit	Per Unit														

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S
991	DCA	40100	lbs	1.05														
992	DCPI	40150	lbs	2.81														
993	P Acid	40200	lbs	.29														
994	P Anhydr	40300	lbs	.92														
995	MO	40400	lbs	.59														
996	Isophor	40500	lbs	.56														
997	Emul	40600	lbs	.70														
998	Emul C8173	40810	lbs	.70														
999	Dowfax 3B2	40700	lbs	7.52														
1000	Aromatic B	40800	lbs	.23														
1001	Amul	40900	lbs	.76														
1002	TM-2 Emulsifier	40910	lbs	1.65														
1003	PolySolv	40920	lbs	.71														
1004	MCPA-IOE	40930	lbs	1.78														
1005	ODCB	41000	lbs	.32														
1006	Sulfuric Acid	41010	lbs	.04														
1007	Nitric Acid	41020	lbs	.16														
1008	Hydrogen	41030	lbs	1.20														
1009	Platinum	41040	tr ozs	500.00														
1010	Soda Ash	41050	lbs	.13														
1011	Lime	41060	lbs	.07														
1012	Plat Cat	41070	lbs	86.00														
1013	Isoph/Mibk	41080	lbs	.52														
1014	Hydrogen Peroxide	41080	lbs	.23														
1015	Xylene (Cedar)	41200	lbs	.24	Jan-01													
1016	Dialymine	41210	lbs	4.79														
1017	Formic Acid	41220	lbs	.50														
1018	Mibk	41300	lbs	.47														
1018	Vangel	41450	lbs	1.37														
1020	Morewet	41460	lbs	1.08														
1021	Polyton	41470	lbs	.62														
1022	Glycer	41480	lbs	.62														
1023	Alfonio	41490	lbs	.78														
1024	Hi Sil	41500	lbs	.83														
1025	Keltan	41510	lbs	5.52	Jan-01													
1026	Sulfuric Acid 93%	41520	lbs	.04														
1027	Caustic 50%	41530	lbs	.06														
1028	Formaldehyde	41540	lbs	.12														
1029	2,4 D-B Acid	41550	lbs	2.00														
1030	Carbon Bisulfide	41560	lbs	.28														
1031	Veegum	41570	lbs	1.97	Jan-01													
1032	60% DMA	41580	lbs	.44														
1033	Citric Acid	41590	lbs	.92														
1034	Step-spense DF 200	41600	lbs	1.27														
1035	Stepwet DF 95	41610	lbs	2.48														
1036	Continental Clay	41620	lbs	.06														
1037	R/M's Standard (cont'd):																	
1038	Morpholine	41630	lbs	1.06														
1039	Sun 7N Oil	41640	lbs	.22														
1040	Anhydrous DMA	41650	lbs	.64														
1041	High Purity Heptane	41660	lbs	.21														
1042	Technical Carbonyl	41670	lbs	3.75														
1043	Ethephon	41680	lbs	3.37														
1044	Sorprophor 4d384	41690	lbs	1.87														
1045	Mixed Nitrating Acid	41700	lbs	.11														
1046	Acetic Anhydride	41710	lbs	.38														
1047	Ethylene Dichloride	41720	lbs	.22														
1048	Proxel GXL	41730	lbs	5.12														
1049	Perkone D	41740	lbs	.33														
1050	Ucarolide	41750	lbs	2.50														
1051	Molinate	41760	lbs	2.80														
1052	Kaolin Clay 16 40	41770	lbs															
1053	Sponto 221 ER	41780	lbs	1.07														
1054	Pebulate Tech	41790	lbs	1.88														
1055	5 gal/20 L Pts	42000	ea	3.95														
1056	30 Mts	42100	ea	15.85														

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S
1057	Stam 35	42200	ea	17.90														
1058	35 m's	42210	ea	19.50														
1059	35 m's Plastic/Stam	42220	ea	15.00														
1060	35 m's Plastic/Prop	42230	ea	15.00														
1061	55 m's	42300	ea	22.05														
1062	55 m's Plastic	42500	ea	22.50														
1063	55 m's-TA	42510	ea	22.05														
1064	55 m's Crystal Litho	42550	ea	21.60														
1065	MTPO Drums	42600	ea	25.55														
1066	Sodium Hypo	42610	lbs	.06														
1067	Caustic 30%	42620	lbs	.07														
1068	Methyl Mercaptan	42630	lbs	.78														
1069	Methanol 99%	42640	lbs	.12														
1070	Hydroxylamine Sulfate	42650	lbs	1.00														
1071	Caustic 17%	42660	lbs	.03														
1072	Hydrochloric Acid	42670	lbs	.05														
1073	Nitromethane 99.5%	42680	lbs	1.38														
1074	Nickel Catalyst	42690	lbs	7.83														
1075	DMA 40% Solution	42700	lbs	.47														
1076	R/M's Standard:																	
1077	Product	Item No	Unit	Per Unit														
1078	Unipacks	44000	ea	2.88														
1078	Jugs-1 Gal Plastic	44100	ea	.43														
1080	Jugs-2.5 Gal Plastic	44200	ea	1.36														
1081	Antifoam AF 8000	45000	lbs	9.60														
1082	Acetone	45010	lbs	.35														
1083	Dimethylolpropionic	45020	lbs	2.83														
1084	Glycerol Monostearate	45030	lbs	.71														
1085	Metacore T-1 Catalyst	45040	lbs	12.26														
1086	Methyldiethanolamine	45050	lbs	2.15														
1087	Proxel GXL Blockade	45060	lbs	6.20														
1088	Toluene Diisocyanate	45070	lbs	1.33														
1089	20% Rayon Grade Caustic	45080	lbs	.11														
1090	50% Caustic	45090	lbs	.08 (Old Rayon Grade)														
1091	Arquad 18/29	45100	lbs	1.15														
1092	Arquar 2C75	45120	lbs	1.85														
1093	Irgalite Blue dye	45130	lbs	13.55														
1094	DC 1500 Antifoam	45140	lbs	6.30														
1095	Drum 55 gal Diuron Col	45150	ea	44.95														
1096	Butachlor	45200	lbs	2.35														
1097	Sodium Cyanide	45300	lbs	.90														
1098	TEAB	45310	lbs	3.90														
1099	Tenneco 500/100	45320	lbs	.18														
1100	36% Hcl	45330	lbs	.10														
1101	Toluene	45340	lbs	.15														
1102	Rock Salt	45350	lbs	.18														
1103	Thionyl Chloride	45360	lbs	.70														
1104	DMF	45370	lbs	.95														
1105	Granular Salt	45380	lbs	.12														
1106	55 ml Drums (Cyper)	45390	lbs	29.50														
1107	2-4 DB Acid 95%	46000	kg	2.55														
1108	Metasulfuron Methyl 90%	46010	kg	116.50														
1109	Acido Propionico Puro	46020	kg	1.27														
1110	R/M's Standard (cont'd):																	
1111	Acido Propionico Usado	46030	kg	1.27														
1112	Diclorocetina 98%	46040	kg	3.00														
1113	Propanil Tech	46050	kg	3.08														
1114	Criston 34	46060	kg	2.26														
1115	Criston 180	46070	kg	2.48														
1116	Acete Banana	46080	kg	.11														
1117	Oxido Mestilco	46090	kg	2.08														
1118	Toluene	46100	kg	.79														
1119	Quinlorac 85%	46110	kg	66.28														
1120	Dichloramin Tech 87%	46120	kg	9.50														
1121	EPTC Tech	46130	kg	2.94														
1122	Anhydrous Hydr Chloride	46200	lbs	.70														

	A	B	C	D	E	F	G	H	I	J	L	M	N	O	P	Q	R	S
1123	Ethylene Oxide	46210	lbs	.42														
1124	Phosphorus Trichloride	46220	lbs	.42														
1125	Butylate Tech	46230	lbs	1.93														
1126	Formic Acid	46240	lbs	.50														
1127	4-Nox	46250	lbs	1.32														
1128	AU-568	46260	lbs	1.10														
1128	Kerosene	46270	lbs	.25														
1130	Monochloro Toluene	46280	lbs	.41														
1131	Aromatic 200	46290	lbs	.27														
1132	AU 567 Emulsifier	46300	lbs	1.15														
1133	AU 545 Emulsifier	46310	lbs	1.15														
1134	Hepes NA Solution	46320	kg	31.40														
1135	1-NP	46330	lbs	2.00														
1136	TEA	46340	lbs	1.26														

Leo

70.71

Leo.

Décines, le 7 Janvier 2002

FROM : D. STEPHAN		TO		
TÉL.	: 04 72. 93 52 56.	C.	Mc GEE	CEDAR
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		Copies		
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		A.	GADRAS	CRIT
		O.	PARDIGON	CRIT

CYCLANILIDE

RE-COMMISSIONING REPORT

Please, find enclosed the report ref. RP/IND/DAP/333/2002/0002/DS – December 19, 2001 about the re-commissioning for the cyclanilide process.

During the last debriefing meeting held with CEDAR headquarters executives, all the people agreed that an 85%-cyclanilide chemical yield was reachable, based on the results obtained during this re-commissioning period. Available analysis we have got in hand at this date, showed unambiguously that the product such proceeded matched the *Active Ingredient* specifications.

CEDAR's plant manager indicated the expected cycle time for its unit: 14 hours, which should allow to reach 1.5 T/day of technical cyclanilide.

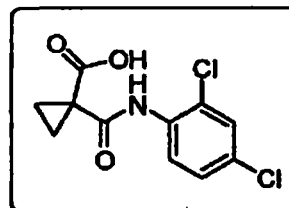
Best regards



Dominique STEPHAN

CYCLANILIDE (RPA 90946)

MINUTES FOR THE RE-COMMISSIONING OF CYCLANILIDE



CYCLANILIDE PROCESS RE-COMMISSIONING IN CEDAR WEST-HELENA' FACILITIES, ARKANSAS, USA.

19th December, 2001

Authors:

Dominique STEPHAN, Olivier PARDIGON, Gérard BERROD and Bernard HERNO

Ref. RP/TND/DAP/333/2002/0002/DS

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CYCLANILIDE RPA90946	N° : 1.0	Rev. : 1.0
CYCLANILIDE PROCESS COMMISSIONING	ClasL : RP/IND/DAP/333/2002/0002/DS	
in CEDAR West-Helena facilities, Arkansas, USA	Sender : STEPHAN D. PARDIGON D. BERROD G. HERNAN B.	
	Date : 19/12/2001	Page : 2/69

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Abbreviations

1.1 Compounds and reagents

Compounds Abbreviations	common name	RPA identifier	RN-CAS
Bis-amide	: bis 1,1-(<i>N</i> -2',4'-dichlorophenyl-carboxamide) cyclopropane	RPA111030	
CPDM	: 1,1-dicarbomethoxycyclopropane	-	[6914-71-2]
Cyclanilide	: <i>N</i> -2',4'-dichlorophenylcarboxamide-1-cyclopropylcarboxylic acid	RPA090946	[113136-77-9]
Cyclanilide-Na	: sodium <i>N</i> -2',4'-dichlorophenyl carboxamide-1-cyclopropylcarboxylate	-	
DCA or 2,4-DCA	: 2,4-dichloroaniline	-	[554-00-7]
Ester	: sodium <i>N</i> -2,4-dichlorophenyl-1-carbomethoxy-1-cyclopropane carboxamidate	RPA093903	
Formic acid	: formic acid	-	[64-18-6]
MeOH	: Methanol	-	[67-58-1]
Xylene	: mixture of isomers 1,4-dimethylbenzene, 1,3-dimethylbenzene and 1,2-dimethylbenzene	-	[1330-20-7]

4.2. Selectivity parameters

4.3.1. Conversion of DCA reagent

For each outlet stream, we define the conversion of 2,4-DCA by the following ratio.

Equation 1: conversion of 2,4-DCA

$$TT_{DCA} = \frac{(\text{DCA initial moles number} - \text{DCA remaining moles number})}{\text{DCA initial moles number}}$$

Conversion of DCA, indicated as TT_{DCA} , is measured at the end of the reactive distillation and also at the end of the hydrolysis step, based on the mass of each organic and aqueous streams and the DCA contents from HPLC-ISTD or GC-ESTD analysis in each of these streams.

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TT_{DCA} is considered as one of the criterion for the process and help to tune the distillation conditions for the next batch (i.e. if TT_{DCA} is lower than expected at the end of stage 1, there is nothing to do for this batch, but corrective tuning has to be performed for the next batch).

4.3.2. Yield in main product cyclanilide

For each outlet stream, we define the measured yield of cyclanilide, indicated $RR_{CA/DCA}$, by the following ratio.

Equation 2: measured yield of cyclanilide

$$RR_{CA/DCA} = \frac{\text{CA moles number}}{\text{DCA initial moles number}}$$

CA yield is measured at the end of the layer separation step. Unless otherwise indicated, the CA content in the aqueous layer referred to CA and not-CA-Na. This assay comes from a HPLC analysis. The $RR_{CA/DCA}$ has to be considered as a criterion of the process. As we know that the solubility of CA in mother liquors and waste wash water is very low, $RR_{CA/DCA}$ value gives quickly the order of magnitude for the batch yield.

4.3.3. Yield in side-product bis-amide

For organic outlet stream, we define the measured yield of bis-amide, indicated $RR_{BA/DCA}$, by the following ratio occurs during the coupling step (i.e. increase of the ester residence time with methanol species in basic conditions). We suggest taking some samples at random and still following this criterion, even the commissioning period is over.

Equation 3: measured yield of bis-amide

$$RR_{BA/DCA} = \frac{\text{BA moles number}}{\text{DCA initial moles number}}$$

The bis-amide formation is also a good criterion to check any drift in the process.

4.3.4. Selectivity in main product cyclanilide towards DCA

Selectivity on the DCA conversion into cyclanilide, indicated $RT_{CA/DCA}$, is defined as the following ratio.

Equation 4: selectivity

$$RT_{CA/DCA} = \frac{RR_{CA/DCA}}{TT_{DCA}}$$

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2 INTRODUCTION

2.1 Miscellaneous information about the site and the plant

1. The plant commissioning has begun on Monday December 3rd, 2001 (Aventis people arrived on Thursday, December 6th, 2001).
2. Safety induction was provided to Aventis people before getting into the site. CEDAR West-Helena site is made up of six plants. The plant where cyclanilide is produced seemed to be built about 12-13 years ago. Originally, its main purpose seemed to be a "single product dedicated plant", but most of the equipment globally fits with the one required for the cyclanilide process. The plant is cleaned and well maintained.
3. Three men per shift work for the cyclanilide plant (2x12 hours). An engineer shift has also been set up, and therefore there was always an executive in charge with the normal shift.
4. To support the commissioning team, the site management has provided an extra analytic support.
5. At the date of Thursday, December 6th, 2001, two batches have been done mostly without the assistance of Aventis people. Batch N°3 to N°11 were run in accordance with the instructions provided by Aventis people, while batch 12 was already in progress.

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2.2 Cyclanilide process

Cyclanilide Active Ingredient is obtained thanks to a process including three main stages.

Stage 1, called "coupling reaction", is characterised by: -

1. A water / xylene azeotropic dehydration step, needed to remove the last amounts of water prior to dose the sodium methoxide.
2. A reactive distillation of methanol which help to displace the equilibrium to the right (see paragraph 2.2.1.1.1, page 9).

Monitored carefully these two distillations, is of the utmost importance. Bad removal for the methanol distillation leads to a quickly decrease of the selectivity $RT_{\text{ester/DCA}}$.

Stage 2, called "hydrolysis reaction", is an ester saponification affording CA-Na, which is performed in a biphasic liquid / liquid media (see paragraph 2.2.1.1.2, page 9). Using the distillation column to store the methanol when formed during the cookout period, the methanol is then discarded from the reaction mixture when distillation starts. At the end stage 2, an organic layer and an aqueous layer were separated. Samples pulled during their transfer help to build the best intermediate molar balance of this process (TT_{DCA} , TT_{ester} , $RR_{\text{CA/DCA}}$, $RT_{\text{CA/DCA}}$, RR_{BADCA}).

Stage 3, called "precipitation/centrifugation" includes a neutralisation of CA-Na by formic acid dosing step (see paragraph 2.2.1.1.3, page 9). After the previous organic and aqueous layers separation, this is the last purification step for this process, and a selective precipitation of the active ingredient, an isolation by centrifugation, then a drying step. Special care should be taken to reach the target pH = 3,8-3,9. Until batch N°8, intermediate net mass determination on the wet cake after centrifugation and determination of its moisture were allowed and we computed the first CA isolated yield $RR_{\text{CA/DCA}}$. Final yield was computed on the dry product, taking into account its assay. After batch N°8, two cyclanilide wet cakes coming from two separate batches have been mixed together for the drying step, because of the need to hasten the production efficiency, according to the 20 T of CA target to reach before the end of 2001 year.

A xylene recovery stage is performed to recover a large part of this solvent. The organic layer separated at the end of stage 2 is redrawn into a reactor fitted with a 9-plates distillation column.

¹ Remaining water and methanol in the organic layer are first withdrawn by an azeotropic distillation. Then, a fractional distillation is performed: first cut is discarded, middle cut contains mostly pure xylene. A part of the solvent is lost to dissolve the heavy compounds and tars, remaining in the reactor bottom before they are drummed out.

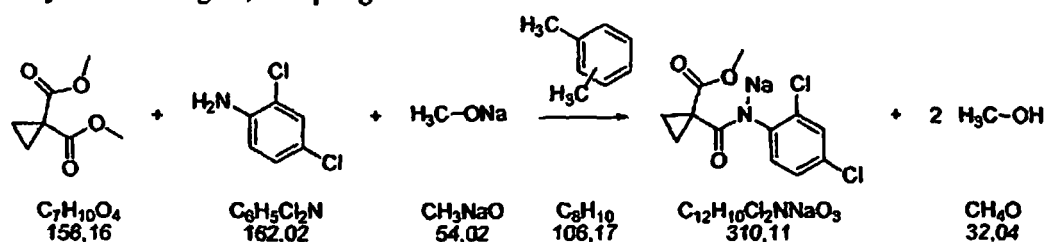
¹ CEDAR's executive indicated that this column had 9 theoretical plates. Taking into account the height for the packing and the packing efficiency (random packing), Aventis people computed 7 theoretical plates. Neither the less, the efficiency, even somewhat lower than expected, should suit for the xylene recovery.

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2.2.1 Chemical equations

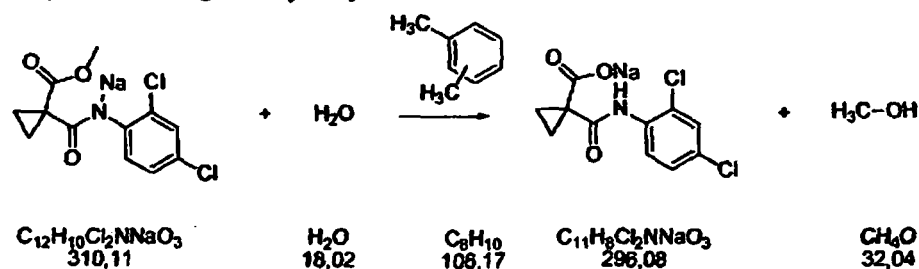
2.2.1.1 Main reactions

2.2.1.1.1 Cyclanilide stage 1, "coupling reaction"



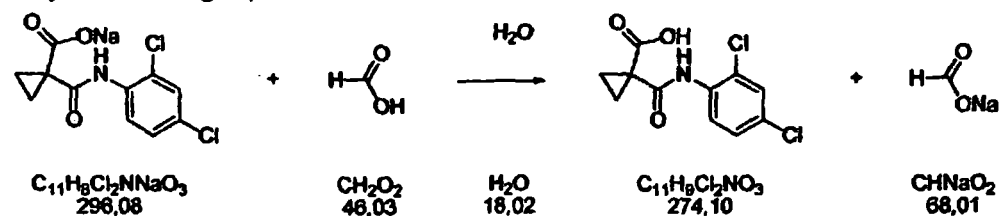
Scheme 1: coupling reaction affording the "ester"

2.2.1.1.2 Cyclanilide stage 2, "hydrolysis reaction"



Scheme 2: hydrolysis reaction affording "cyclanilide-Na"

2.2.1.1.3 Cyclanilide stage 3, "acidification"



Scheme 3: acidification leading to "cyclanilide"

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2.2.1.2 Side reactions

2.2.1.2.1 Sodium methoxide hydrolysis

Before the beginning of the coupling step, base hydrolysis reaction occurs if sodium methoxide is not precautionary stored or handled. Sodium hydroxide reacts with the CPDM ester functions and dramatically affects the cyclanilide global yield.

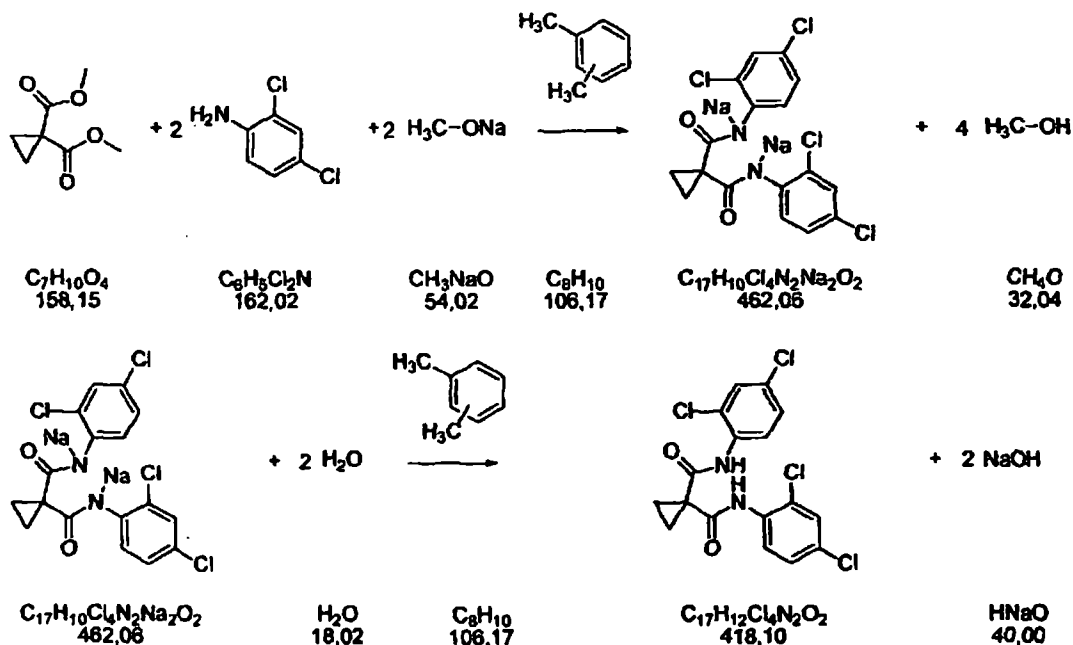
When water is added to the reaction mixture at the end of stage 1, the unconverted excess of sodium methoxide is then hydrolysed.



Scheme 4: reaction of sodium methoxide with water

2.2.1.2.2 Bis amide formation

The bis-amide formation is a side-reaction generally observed when the stage 1 global cookout time (i.e. time for sodium methoxide addition plus time for methanol distillation) increases. Because of its high affinity for the organic layer, most of bis-amide is easily withdrawn from the aqueous layer during the decantation step.



Scheme 5: main side reaction leading to a "bis-amide" compound

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2.2.1.2.3 Neutralisation of caustic

During the formic acid step, part of the formic acid neutralises the excess of caustic.



Scheme 6: neutralisation of caustic

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2.2.2 Block diagrams

2.2.2.1 Cyclanilide stage 1, "coupling reaction" block diagram

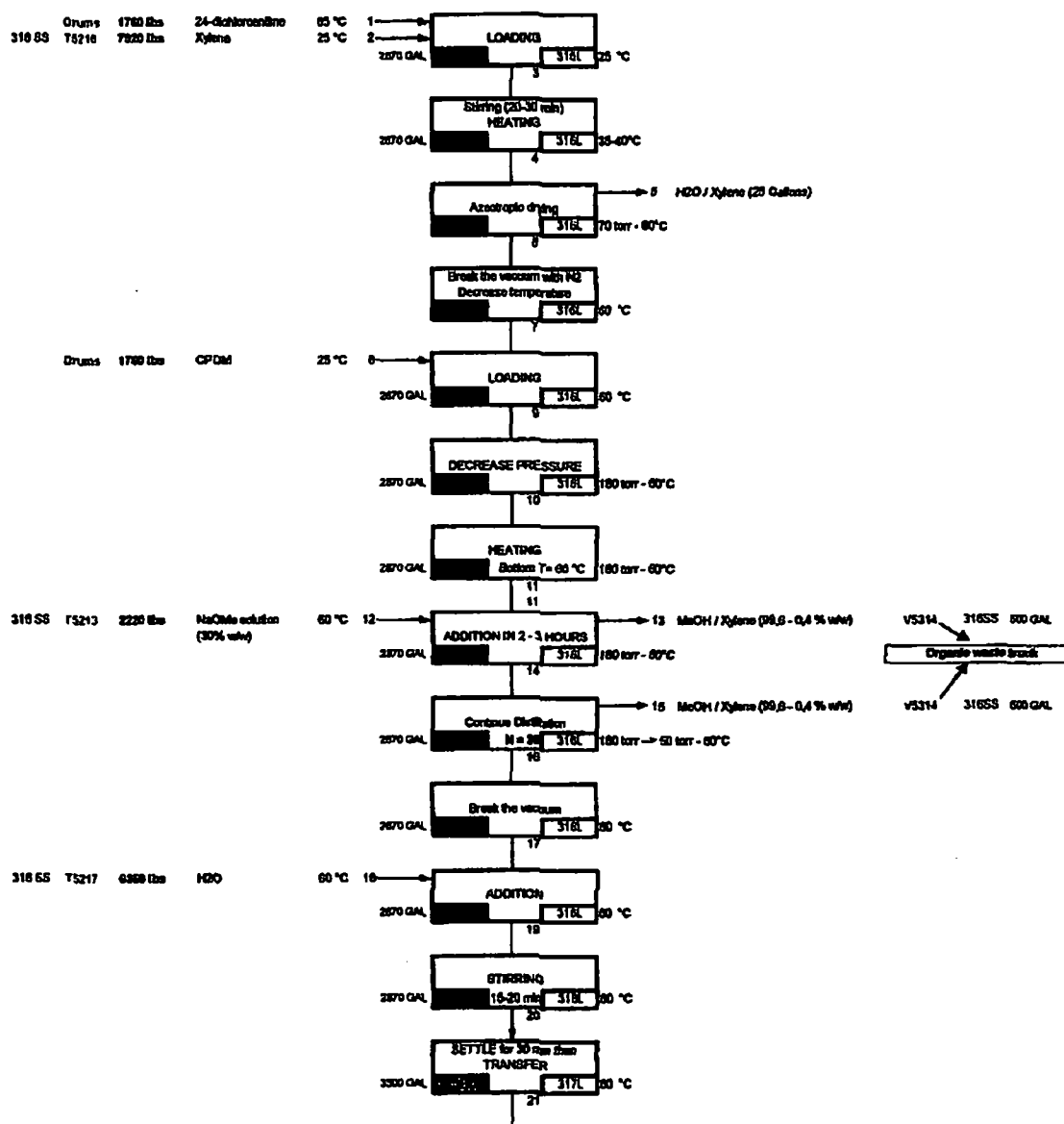


Figure 1: block diagram for the coupling reaction

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2.2.2.2 Cyclanilide stage 2, "hydrolysis reaction" block diagram

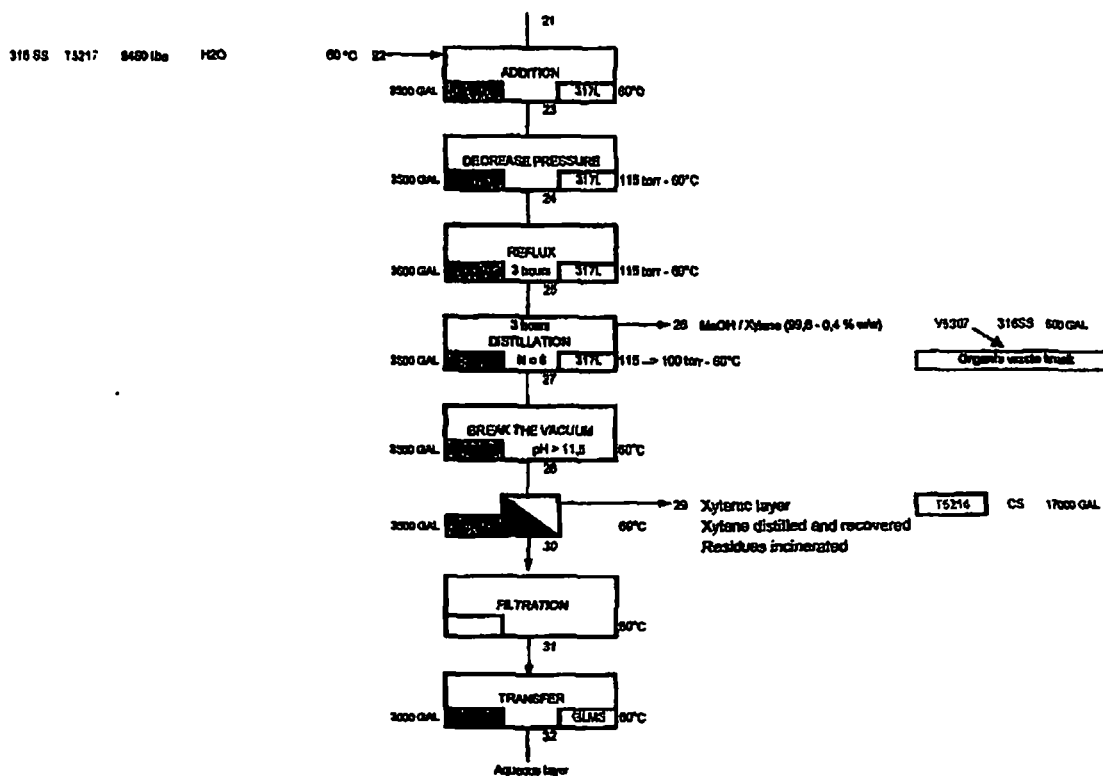


Figure 2: block diagram for the hydrolysis reaction

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2.2.2.3 Cyclanilide stage 3, "precipitation/centrifugation" block diagram

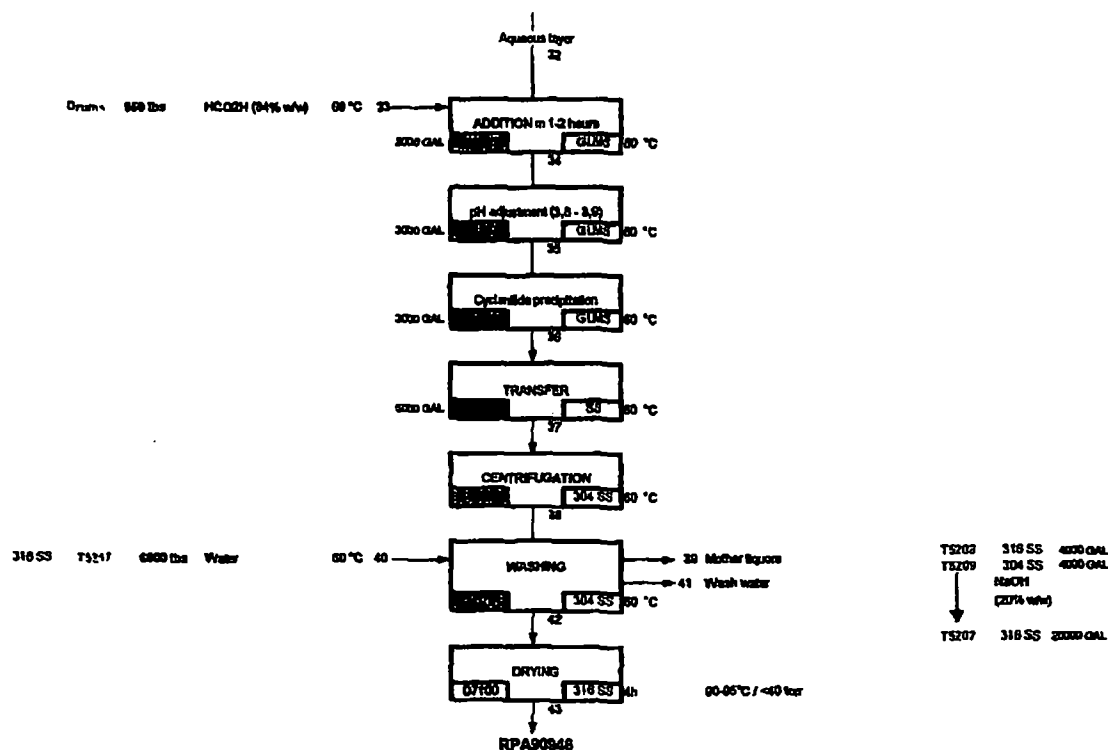


Figure 3: block diagram for the precipitation/centrifugation

2.2.2.4 Xylene recovery block diagram

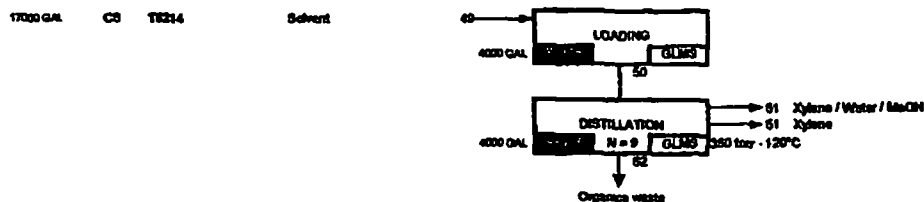


Figure 4: block diagram for the xylene recovery

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2.2.3 Global performances / expectations

2.2.3.1 Main targets

1. The process is designed to produce cyclanilide active ingredient, with a yield of (85±1)%.
2. The cycle time per batch was about 15 hours during the last cyclanilide campaign, roughly the same value as for the cycle time mentioned by the cyclanilide last subcontract manufacturer, DEGUSSA-HULS.
3. As showed in Table 1, page 15, with the loads of the raw materials indicated for one batch, 2575 lbs (1168 kg) of crude cyclanilide (assay > 96%) per batch are expected.
4. Therefore a production efficiency of 3307 lbs (1.5 tons) per day for a reliability factor of 100% is targeted.

Table 1: amounts of raw materials per batch

	Load [kg]	Load [lbs]
2,4-DCA	800	1760
CPDM	800	1760
MeONa solution (30% w/w)	1008	2218
Xylene (coupling reaction)	3600	7920
H ₂ O (hydrolysis reaction)	3992 = (2881+1111)	8800 = (6350+ 2450)
HCO ₂ H (85% w/w)	439	965

2.2.3.2 Miscellaneous

1. The DCA conversion should be at least up to 95%.
2. The bis-amide yield should be at the very most 5%.
3. The amount of water in wet cyclanilide, after centrifugation, is roughly 10-20%.

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3 COMMENTS FOR THE PRODUCTION OF THE FIRST BATCHES

3.1 Coupling reaction

3.1.1 Short description of the required apparatus

R-5104 – 316L – 2870 GAL – purpose: coupling reactor

C-5104 – size: 23,5"Dx42'-3"T/T – purpose: distillation column for methanol reactive distillation, number of theoretical plates known by CEDAR = 30.

3.1.2 Cycle time

The best cycle time was obtained for batch 4: 13.0 hours (taking into account batches 3 to 11). See more details in Appendix II: cycle time, bottleneck of the process, page 35.

3.1.3 Standard operating procedure

1. DCA drums were heated in the hot house at 185°F in order to avoid a crystallisation of 2,4-DCA in the drums during their load into the reactor R-5104.
2. R-5104 and C-5104 equipments were checked. Reactor R-5104 was purged with nitrogen.
3. The drums were loaded into the vessel from the loading station by push – pull effect caused by nitrogen pressure – vacuum sequence. After the loading step, the drums were re-weighted again. Average technical DCA mass loaded per batch: 1759 lbs. Therefore, the net weight of the two raw materials can be considered as accurate so far (see chapter 3.1.4 Comments / remarks, page 18, paragraph 1).
4. Reactor R-5104 was purged with nitrogen.
5. Xylene (both fresh and recover) was fed into the vessel via a volumetric pump.
6. The mixture was homogenised during 10 minutes, then sampled and the amount of xylene fed was checked thanks to a GC-ESTD analysis and the net weight of DCA loaded. All the samples we analysed, showed that the xylene delivery was as expected, average xylene mass loaded per batch: 8000 lbs. The water content before starting the azeotropic distillation was measured from previous sample: order of magnitude: 700–1000 ppm.
7. The reactor was purged with nitrogen.
8. Bring column head condenser into service; brine circulation was switch on, and inlet brine temperature was checked: 12°F. Pressure was decreased gradually from 760 torr to 70 torr in fifteen minutes. Reaction mixture was heated by steam until the reaction mixture temperature reaches (173±4)°F. Allow the column head temperature to stabilise (no temperature variation over 15 minutes, set setpoint level for the intermediate distillate receiver at 10%. Check brine outlet temperature, adjust the brine flow a such a way that brine outlet temperature do not go down 36°F. Steam supply was increased until the reflux reached 25 lbs/min, while level in the intermediate distillate receiver V-5315 was kept at 10%.
 - A. The column was allowed to reach its steady state for 5 minutes, the column head temperature varied from (102±4)°F to (73±2)°F, while reflux flow was always constant (25–30 lbs/min).
 - B. Set reflux flow setpoint to 0 lbs/min and let the level increase into V-5315 from 10% to 30%.

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C. When the V-5315 reached 30%, remove part of the distillate and let the V-5315 level decrease from 30% to 10%.

Place the column at total reflux for a five minutes period.

Repeat the procedure (A-B-C) until the overhead temperature reached 140°F, then the remaining amount of water-xylene azeotrope was continuously distilled with V-5315 level set to 10% and reflux flow set to 20 lbs/min. Distillation was stopped when the overhead temperature reached 148.6°F. The reaction mixture was sampled, the order of magnitude for water content was 200~600 ppm. The amount of distillate was computed according to the strapping table, a xylene make-up was performed according to the amount of distillate (average mass = 1180 lbs per batch). The reactor R-5104 was cooled to (140±4)°F.

9. CPDM was loaded from the drum loading station into the reactor. Same procedure for loading each drums of CPDM as for DCA drums was applied. The reaction mixture was stirred for 10 minutes then sampled and the ratio of the three compounds (xylene, DCA and CPDM) was always in accordance with expectations, up-dated average CPDM mass loaded per batch: 1758 lbs.
10. Reaction mixture temperature was stabilised to (140±2)°F.
11. Vacuum was pulled on R-5104 to a pressure of 180 torr.
12. Sodium methoxide solution was charged in the fixed volume delivery tank. A glass sight was used to check that the required amount of reactant was available.
13. The reaction mixture temperature was checked: (140±2)°F, then sodium methoxide (2283 lbs) was added to the reaction mixture into R-5104 with a mass flow rate target: 19.0~25.4 lbs/min, expected duration: 1.5~2 hours.
14. The methanol vapours reached the column head, while the column was under total reflux conditions (column head temperature = (89±1)°F, reflux flow = 30 lbs/min, volume level in the intermediate distillate receiver = 10%) for 45 minutes after dosing sodium methoxide. Once the column head temperature was stabilised, the distillation began with reflux flow = 8 lbs/min and the distillate take-off in V-5314 started. Reflux flow was adjusted to maintain the overhead temperature at (89±1)°F.
15. When the sodium methoxide dosing step was completed, the reduced pressure was gradually decreased to 50 torr in 1 hour by a ramp program. During this step, the reflux flow was adjusted to 18 lbs/min (such a way that the overhead temperature best fitted with methanol-xylene azeotrope pressure law).
16. When the reduced pressure ramp was complete, the reduced pressure was about 50 torr, no methanol was coming over, as evidence by a constant reflux flow and no output on the level controller, the reflux valve was closed. The overhead temperature increased. When the overhead temperature reached 105°F, it was decided to stop the distillation: break the vacuum and restore a nitrogen blanket.
17. Sample the reaction mixture and check DCA conversion.
18. Water, 6350 lbs, was charged into R-5104 within 5 to 10 minutes to thin the reaction mixture before the transfer.
19. Reaction mixture was stirred for 30 minutes, then stop agitator and let the reaction mixture settle for 1 hour (see CEDAR's plant manager comments in chapter 3.1.4.4 Settling time, page 19).
20. The batch was transferred to the next reactor (average mass transferred: 18541 lbs).
21. The distillate stored in V-5314 was transferred back to the R-5104 via a spray-ball to flush the reactor (ready for next batch), then transferred to the waste truck (average mass = 1799 lbs per batch).

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3.1.4 Comments / remarks

3.1.4.1 DCA drums net weight

The DCA drums were expected to weight 200 Kg (net weight). In fact, the net weight for each drum was 250 Kg; this discrepancy led to difficulties during the manual handling of the last fourth drum during the DCA loading step. Explanations: "The 3 drums of 2,4-DCA and only 50 Kg of the last fourth one are weighted before and after the discharge of the drums." It should be better and less time consuming to ask the 2,4-DCA supplier to load only 200 kg technical DCA per drum.

3.1.4.2 Influence of the duration of the coupling step

The drift for the yield we observed in the first batches prompted us to look into previous process optimisation work, and modify accordingly the standard operating procedure to reduce the time when the ester was present with large amounts of methanol. For this purpose, sodium methoxide dosing step was decreased to 1.5 hour and its subsequent methanol distillation step started about 30~40 minutes after the beginning of the sodium methoxide dosing (just the time needed for the column to reach its steady state).

1. By reducing the residence time of the reaction mixture during the coupling step, the average cyclanilide yield for batches 3 to 6 increased to reach up to 78.9%. Global optimisation of all the steps of the cyclanilide process, for stages 1 and 2, allowed to reach the target yields: batch 8: 85.4%; batch 10: 85.6%; batch 11: 85.5%.
2. In a second hand, we started the methanol reactive distillation during the sodium methoxide-dosing step. A 0:40~0:45 delay between the two steps was reasonable, since it allowed the column reaching its steady state before beginning take-off the methanol. Optimisation of the coupling stage procedure allowed to reach 3-period average yield 83.9% for batches 07-08-09 and 84.4% for batches 08-09-10 Conversion of 2,4 DCA was up 97% (target: 95%).

3.1.4.3 Improvement of the methanol reactive distillation

Since last campaign runs, the reactive methanol reactive distillation was fine-tuned again.

1. Keeping the level at its lower value (10%) into the intermediate distillate receiver V-5314 was of the utmost importance to let the column work in appropriate conditions (see Table 2, page 18).
2. Increasing the reflux ratio as a function of the column head temperature and the elapsed time was the key point of this step. The amount of waste effluents to burn decreased from 2500 lbs to 1790 lbs (-28%). The average xylene content in distillate was closer to 11~12%. The protocol to run the step is fully described in Appendix I: coupling reaction, standard operating procedure, page 31, some table and graphs are also gathered.

The main guidelines for the coupling reaction are now available, but a gradually improvement of the reflux conditions at the plant size directly, should increase the percentage of methanol in the distillate, and therefore restricts xylene losses.

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Table 2: evolutions of the reflux flow a function of the reduced pressure

	Action	Reduced pressure [torr]	Reflux flow [lbs/min]	V-5315 Level [%]
	Start MeONa/MeOH dosing step within a 1:30 to 2:00 duration and total reflux on the column for about 0:40~0:45	180	25~30	10
	Distillation under constant reduced pressure, about 0:40~0:45 after the beginning of the MeONa/MeOH addition	180	8	10
	At the end of the MeONa/MeOH addition, reduced pressure ramp in one hour	180~150	18	10
	End of the reduced pressure ramp one hour after its beginning	~50	0	10
	End of the distillation when top temperature reached 105°F	~50	0	10

3.1.4.4 Settling time

From an optimisation point of view, there is no contraindication to reduce gradually the settling time from 1 hour to 30 minutes by testing the influence of this parameter in a test on a five batches-period. The initial intent of settling the batch was to minimise the water remaining after transfer. Moreover, the reactor was rinsed with the methanol distillate via a spray ball at the end of stage 1, then the azeotropic drying before sodium methoxide addition was performed prior the sodium methoxide dosing step.

3.1.4.5 Miscellaneous

1. Weight sensors for R-5104 were not accurate at all.
2. The sodium methoxide flow value was never monitored since this flow meter totalizer never worked. As the results of the two first batches were somewhat disappointed in terms of DCA conversion, both CEDAR and Aventis people decided to increase the amount of sodium methoxide. The amount to be loaded in the vessel increased from 2200 lbs to 2283 lbs of 30 w-% sodium methoxide. Due a level estimation (through a sight glass in the new sodium methoxide delivery tank CEDAR just installed for this purpose), nobody was sure of the exact amount of sodium methoxide to be delivered each batch.



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3.2 Hydrolysis reaction

3.2.1 Short description

R-5101 – 317L – 3500 GAL – purpose: cyclanilide hydrolysis reactor

C-5101 – no data available – purpose: distillation column for hydrolysis reactor, number of theoretical plates known by CEDAR = 4, but type of packing unknown.

3.2.2 Cycle time

The best cycle time was obtained for batch 4: 10.3 hours (batches 3 to 5). See more details in Appendix II: cycle time, bottleneck of the process, page 35.

3.2.3 Standard operating procedure

1. Check R-5101 and C-5101 equipments.
2. Pressure test and purge R-5101 reactor with nitrogen.
3. The organic and aqueous were sent to R-5101 from R-5104. R-5101 agitator was started.
4. The supplement of water, 2450 lbs, was added.
5. Purge the reactor with nitrogen.
6. Vacuum was applied and the reduced pressure was gradually decreased to 200 torr, while keeping an eye on the column sight glass to check for any foam.
7. Open the steam valve on the R-5101 jacket and allow the reaction mixture temperature to stabilise at $(140 \pm 2)^{\circ}\text{F}$. As the reactor heated, methanol distilled off and condensed in E-5501B and collect in V-5307B, while reflux flow value was about (3.0 ± 0.5) lbs/min. When the level in V-5307B reached 30%, place the column under total reflux conditions. When the reaction mixture temperature reached $(140 \pm 2)^{\circ}\text{F}$, the three hours total reflux period began.
8. When the hold period is completed, adjust the pressure setpoint to 175 torr. Begin to take the methanol to the waste organic truck, while reflux flow value was about (1.5 ± 0.5) lbs/min. About 1000 lbs per batch of distillate were collected in the waste organic truck.
9. When the distillation is completed, shut off the reflux, break the vacuum and restore a nitrogen blanket.
10. Shut off the agitator and allow the batch to settle for 1 hour.
11. Check the transfer line from R-5101 to R-5103. Transfer the aqueous layer (average mass = 11480 lbs per batch) from R-5101 to R-5103. Leave the rags (located at the interface) in the organic layer. Sample the aqueous layer during the transfer. At the end of the hydrolysis reaction, it does not remain the ester group any more, ester conversion mostly up to 99%.
12. Check the line for the transfer from R-5101 to T-5214. Transfer the organic layer (average mass = 6980 lbs per batch) from R-5101 to T-5214. Sample the organic layer during the transfer.

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3.2.4 Comments / remarks

3.2.4.1 *Hydrolysis reaction*

The hydrolysis started in R-5104 as soon as the water was added and mixed with xylene. Roughly 70% of the ester was converted into cyclanilide-Na before the transfer to R-5101. Sample the reactor during the transfer from R-5104 into R-5101 gave always wrong figures once its was analysed. Furthermore, the samples were not analysed as soon as they were pulled from the reactor. The results were therefore none-representative, and there was no need to maintain this analysis anymore. Three hours under total reflux then two hours of distillation were needed to bring this reaction to its completion: ester conversion was up to 99% in most of the batches. Do not try to reduce the cookout time without a kinetic study of this reaction.

Table 3: trend for the ester contents in the organic layer and its conversion

	Batch 3	Batch 4	Batch 5	Batch 6	Batch 8
Ester content in aqueous layer	0.7%	0.6%	0.3%	<0.1%	<<0.1%
TT _{ester}	98.9%	99.2%	>99.5%	>99.5%	>99.5%

3.2.4.2 *Working point for the column under total reflux conditions*

The working point was a compromise between the reduced pressures (enough low to remove the methanol, but not a too high value to avoid losses of too much xylene) and the steam introduced in the vessel jacket. At 195 torr, the reflux flow that was sent back to the column reached only 87 kg/h, a value which a rather low. Trying to increase the thermal power, we observed a positive drift of the reduced pressure that could not decrease down to 210 torr (the vacuum control valve was 100%-opened. It seems that some methanol should pass through this condenser. Trying to increase the brine inlet-outlet difference of temperature by increasing its flow, the vacuum was somewhat better: 190 torr. As the brine inlet temperature was 14°F, we did not want to go down 36°F to avoid any risk of freezing water distilled with the azeotrope.

CEDAR's plant manager explanations were listed underneath:

"The vacuum problems observed were due to discontinued use of the primary condenser. Without the primary condenser, the pressure drop between the primary and secondary condensers becomes a problem. With the primary condenser in service, it is now possible to reduce pressure to 150 torr. However, reduced pressure still does not result in the expected increase in reflux."

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3.2.4.3 Check for the amount of remaining methanol at the end of the distillation.

Since last campaign, we knew that the methanol removal was of the utmost importance. An analysis to check the methanol contents in both aqueous layer and in xylene layer was done in order to check that the entire methanol was distilled. The results showed low amounts of methanol remaining in both aqueous layer and in organic layer.

Table 4: trend for the methanol content in both organic and aqueous layers

Methanol content	Batch 4	Batch 5	Batch 6	Batch 8	Batch 9
Organic layer	0.4%	<0.1%	<0.1%	<0.1%	<0.1%
Aqueous layer	2.1%	1.0	0.8%	1.6%	0.6%

3.2.4.4 Miscellaneous

- Because we first do not dare to freeze the water coming at the column head with the water-xylene azeotrope with two condensers supplied with brine, the small one was bypassed.
Then, because they believed that there was enough methanol in the distillate to prevent the water from freezing, CEDAR people has decided to feed again the small condenser with brine (see CEDAR's plant manager comments in chapter 3.2.4.2, page 21).
- The decantation was very good, no issues were neither reported, nor heard. As expected, the rags found at the interface at low amounts, were send with the organic layer. Separation was done visually, conductivity measurement was found to be too unreliable.
- Currently, the layer separation at the end of the coupling stage, rags remain into the organic layer. To improve the xylene recovery yield, we propose to remove selectively the rags located at the interface, by applying the following procedure: -
 - transfer the aqueous layer into the precipitation reactor R-5103, as described in the current SOP.
 - transfer rags plus a small amount of xylene into the waste organic truck.
 - transfer the organic layer in the storage tank T-5214.
 With this slightly modified procedure, we should avoid insoluble water in the waste xylene to be recovered.

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3.3 Precipitation

3.3.1 Short description

R5103 – GLMS – 3000 GAL – purpose: cyclanilide precipitation reactor
V-5312 – SS – 5000 GAL – purpose, centrifuge feed tank

3.3.2 Cycle time

The best cycle time for the precipitation reactor R-5103 was obtained for batch 5: 3.8 hours (B3-B5). See more details in Appendix II: cycle time, bottleneck of the process, page 35.
The best cycle time for the centrifuge relay V-5312 was obtained for batch 5: 5.6 hours.
Considering its large storage capacity, its did affect the global cycle time of the process.

3.3.3 Standard operating procedure

1. The reactor R-5103 was checked before receiving the aqueous layer from R-5101.
2. A pressure test was performed on reactor R-5103.
3. The aqueous layer was transferred from R-5101 to R-5103. R-5103 stirrer and recirculation pump loop were switch on. Reaction mixture temperature was stabilised at $(140 \pm 2)^{\circ}\text{F}$.
4. The gross weight for formic acid drums was measured on the scale. An amount of formic acid equivalent to 80% of the theoretical mass computed was dosed in about 00:45. The reaction mixture was stirred at $(140 \pm 2)^{\circ}\text{F}$ for 15 minutes. The pH of the reaction mixture was then carefully checked under stirring, and formic acid was added portion-wise via a diaphragm pump until the target value for pH was reached.
5. A sample was then pulled from the reaction mixture, and pH was check on more time at the laboratory to ensure of the pH value. The drums of formic acid (250 Kg each) were weighed to compute the net weight of formic acid dosed into the reactor. So, the weight of this raw material was accurate.
6. The reaction mixture was transferred in the centrifuge feed tank V-5312. For the commissioning period, special care was taken to transfer the entire precipitated product by washing the vessel wall with water.
7. The reaction mixture was stored in V-5312. Agitator and recirculation loop pump were started up.
8. The centrifuge was fed from the centrifuge relay V-5312.

3.3.4 Comments / remarks

For the two first batches, we have had a problem with the pH probe (pH meter in the plant was re-calibrated after the first batch and CEDAR's plant manager has decided that it shall be re-calibrated at least once time per week). The indication was worse so the amount of formic acid was too high (10%-15% more than for the theory). A new probe has been installed for the batch N°3, so the problem was considered as solved, since pH measured by the two different probes were the same.

As checked during the previous campaign, the amount of cyclanilide in mother liquors was down to 0.03 w-% (this figure represented a lost in cyclanilide yield less than 0.1%).

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We would like to repeat the recommendations written out during the previous campaign. In case of a possible plant shutdown, cyclanilide batch should be stored in the most appropriate conditions: -

1. Nitrogen blanket.
2. If formic acid has already been added to the precipitation vessel and pH reaches 3.8, decrease the reaction temperature in vessel V-5312 or R-5103 at 70°F (20°C).
3. If formic acid has not been yet added, add formic acid and adjust pH=7 (versus pH=12~13) in order to minimise the hydrolysis of amid group, then decrease the reaction temperature in vessel V-5312 or R-5103 at 70°F (20°C).

Before to start the centrifugation, it will be necessary to heat the solution to 140°F (60°C). No comment to express for this re-commissioning. We repeat the other recommendations written out during the previous campaign.

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3.4 Centrifugation

3.4.1 Short description

CF5701 – 304SS – Basket diameter = 1.219 meter – Basket height = 0.914 meter – Filtration area = 3.5 m² – Type of discharge = knife discharge – Type of washing bar = Feed pipe.

3.4.2 Cycle time

Six loads are done per batch. As the cycle time per load is 1.5 hour, the cycle time per batch is 10 hours. The best cycle time was: 9.8 hours. See more details in Appendix II: cycle time, bottleneck of the process, page 35.

3.4.3 Standard operating procedure

1. 20% diluted caustic (350–400 gallons) was loaded in the mother liquors receiver tank T-5208.
2. The centrifuge was fed from the centrifuge relay V-5312.
3. Mother liquors (9000 lbs per batch, difficult to get a more accurate value) were stored in T-5208. Mother liquors were sampled for analytical purposes.
4. The cake was washed with water, 90 gallons per centrifuge load.
5. The wastewater washes (552 gallons per batch) are collected in T-5208.
6. A normal batch size leaded to 6 centrifugations per batch. The damp cake was collected into supersacks (one batch was collected in three to four supersacks).
7. Supersacks were stored in a warehouse before drying.

3.4.4 Comments / remarks

Centrifugation step proceeded smoothly at in CEDAR's facilities, whereas the same centrifugation step was the bottleneck in the DEGUSSA-HULS plant. Increasing the reaction mixture temperature for the centrifugation from 20°C to 60°C was indeed a real process improvement. The amount of water remaining in the wet cyclanilide is about 10% (versus 18% for DEGUSSA-HULS).

3.5 Drying

3.5.1 Short description

D7100 – 316SS – purpose: bicone dryer.

3.5.2 Cycle time

The best cycle time was 21 hours for drying 2 batch. Until batch N°8, only one batch will be separately dried, then wet cyclanilide is dried per 2 batches.

3.5.3 Standard operating procedure

The only recommendation concerning the drying step is not to exceed a temperature upper than 203°F (95°C) and to use a good vacuum (20 torr).

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3.5.4 Miscellaneous information

ACS headquarters insists on the aesthetic appearance for the active ingredient: avoid making lump when drying. Investigations concerning the discharge from the "bicone" dryer to the drums includes a grinder, with a sieve with a side draining-off to remove continuously the lumps. Furthermore, visual appearance of the product, which has just packaged shows no lumps at all.

3.6 Xylene recovery

3.6.1 Short description

R-5105 – GLMS – 4000 GAL – purpose: xylene recovery pot

C-5105 – SS316 – distillation column for xylene recovery, number of plates indicated by CEDAR people 9.

The xylene recovery is currently on going.

3.6.2 Cycle time

Cycle time for xylene recovery is currently 16 hours, but it can be easily decreased to 12 hours. Two batches of organic layer were gathered and leaded to one xylene recovery batch. At the present date, only one xylene recovery was run. See more details in Appendix II: cycle time, bottleneck of the process, page 35.

3.6.3 Standard operating protocol

1. Purge reactor R-5105 with nitrogen.
2. Transfer the xylene-water distillate coming from the coupling dehydration step from V-5314 to R-5105.
3. Transfer the organic layer from R-5101 to R-5105 coming from the hydrolysis stage.
4. Switch on the stirrer.
5. Set reduced pressure setpoint to 580 torr.
6. Open the brine inlet valve on the condenser (brine inlet temperature = 15°F).
7. Set level in the intermediate receiver V-5317 to 20%; adjust steam pressure setpoint to about 350 lbs/hour accordingly.
8. Allow the column to reach its steady state under total reflux conditions (overhead temperature constant within a 10 minutes period) for 15 minutes.
9. Stop the reflux flow which was sent back to the column and let the distillate level raise in the intermediate distillate receiver V-5317 from 20% until the level reached 50%.
10. Collect the first cut distillate into T-5210 by decreasing the V-5317 level from 50% to 20%.
11. Once part of the distillate was removed from the intermediate receiver, place the column under total reflux for a 5-minutes period.
12. Apply the same procedure as described in paragraphs 9 to 11 until the column head temperature reached 254°F.
13. When the column head temperature reached 254°F, the reduced pressure was gradually decreased from 580 to 200 torr, while applying the same procedure described in paragraphs 9 to 11. Sample the distillate in the intermediate receiver flask every hour and check the water content in the xylene. When the water content was lower than 2000 ppm, stop the current procedure and prepare to collect the middle cut.

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14. Distil continuously the middle cut and take-off the distillate with V-5317 opening set to 50% until the reaction mixture temperature reached 240°F.
15. When the reaction mixture temperature reached 240°F, stop the steam supply on R-5105, break the vacuum and restore a nitrogen blanket.
16. Purge the reactor R-5105 content (distillation residue) every two xylene recovery batches. Distillation residue was transferred to waste organic truck.
17. First xylene recovery run leaded to a 57%-recovery yield (target: 90%), optimisation was still in progress. Below are listed some comments from CEDAR's plant manager concerning the xylene recovery itself: -
 - a. Actual recovery is higher than 57%.
 - b. Most of xylene removed during light compounds cut is recycled back to the Organic Hold Tank T-5214.

At the end of the dehydration step of coupling reaction, the mixture water-xylene was sent to R-5101, the two layers were allowed to settle then separated. At the interface, a small amount of xylene must be purged with the water (in order to improve the xylene recovery yield, no insoluble water must remain in the xylene layer).

3.6.4 Comments / remarks

1. Please, take into account the previous remark, that the smallest amount of water withdrawn with the xylene layer will dramatically affect the xylene recovery yield.
2. During the take-off of first distillation cut, the removal of light compounds performed with a continuous distillation (instead of filling the emptying part of the intermediate receiver) should reduced the mass of the first cut, and therefore increase the xylene recovery yield.

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4 PERFORMANCES OF THE PROCESS

During the previous 2001 campaign, batches N°5 to N°6 affords cyclanilide in 85% chemical yield. Previous batches N°1 to N°4 could not be taken into account, because of water pH issue that was responsible for a cyclanilide lost in wastewater reaching 15%.

4.1.1 Up-date of the previous improvement action plan and follow-up work

Hereafter are listed the main items identified during the last campaign for a process improvement (see paragraph 3 page 69).

Table 5: previous improvement action plan and follow-up work

Previous recommendations from Aventis' point of view	Action
The efficiency of the methanol distillation could be improved by looking carefully to the differential pressure transmitters between the top and the bottom of the distillation column (avoid any risk of flooding is the purpose of this measurement).	The operators monitored sometimes the differential pressure during the distillation.
To check the methanol content in the reaction mixture by GC-ESTD analysis allows controlling the distillation efficiency and the distillation fine-tuning. If some methanol remains in the reaction mixture after the distillation step, it is likely that it will be mostly found in the aqueous and organic layers after the hydrolysis step. As a consequence, the amount of aqueous effluent to recover would increase.	The methanol content was measured by sampling the reaction mixture each batch during the commissioning.
As the centrifugation is not the bottleneck of the cyclanilide process so far, avoid overloading the centrifuge.	
The weight cells for the reactors R-5104, R-5101 and R-5103 do not allow to build a reliable mass balance.	R-5101 weight cells gave now accurate values.

New recommendations from Aventis' point of view	Action
The main purpose for the methanol reactive distillation in the coupling reaction, is to remove the methanol as quickly as possible. As soon as the column reached its steady state (current time to obtain a column head temperature stable: 30~40 minutes after dosing sodium methoxide), start take-off of distillate. Increase the reflux ratio when the reduced pressure is decreased from 180 to 50 torr. Suppress any reflux when the reduced pressure reached 50 torr to displace methanol in the column hold-up.	

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4.1.2 Coupling reaction performance

Batches 8, 10 and 11 clearly showed that good performances could be obtained: -

1. DCA conversion reached higher values: $TT_{DCA} = 97\%$,
2. Ester yield computed by the formula $RR_{ester/DCA} = RR_{ester/DCA}$ (ester found in aqueous layer) + $RR_{CA/DCA}$ (CA-Na found in aqueous layer), reached the target value: $RR_{CA/DCA} = 85\%$.

4.1.3 Hydrolysis reaction performance

Batches 8, 10 and 11 clearly showed that good performances could be obtained: -

1. Ester conversion reached the expected value, $TT_{ester} \geq 99\%$,
2. Cyclanilide yield was the best yield we obtained, $RR_{CA/DCA} = 85\%$.

4.1.4 Main conclusion about chemistry

Once coupling reaction was fine-tuned, chemistry gave expected performances. Process is now on the right tracks: cyclanilide pure/pure yield: $RR_{CA/DCA} = 85\%$.

4.1.5 Propositions in order to improve the process

Optimise the sodium methoxide dosing rate, according the removal rate of methanol by distillation.

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5 MAIN CONCLUSION

The next trend presented on Figure 5, page 30, clearly illustrates that a 85%-measured yield for cyclanilide was reached for batches 8, 10 and 11 (unfortunately, a maloperation during water dehydration for batch 9 decreased the amount of DCA initially loaded into the vessel, which affected the cyclanilide yield).

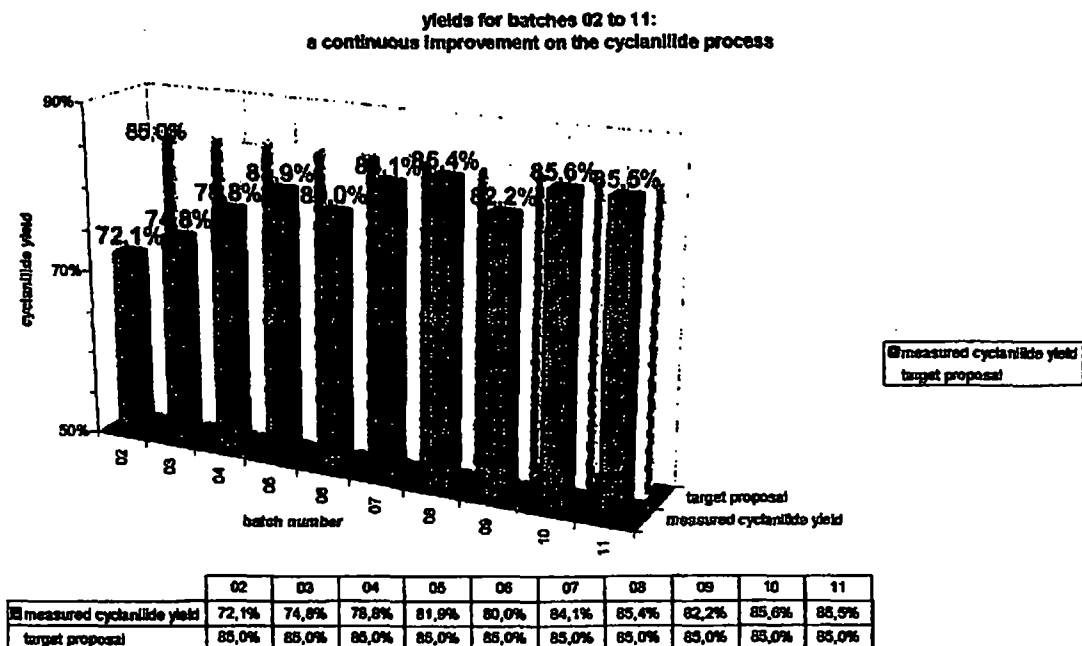


Figure 5: trends for the main parameters involved in the methanol reactive distillation

During the last debriefing meeting with CEDAR headquarters persons, all the people agreed that an 85%-cyclanilide chemical yield was reachable, based on the results obtained during this re-commissioning period. Available analysis we have got in hand at this date, showed unambiguously that the product such proceeded matched the **Active Ingredient specifications**.

CEDAR's plant manager indicated the expected cycle time for its unit: 14 hours, which should allow to reach 1.5 T/day of technical cyclanilide.

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6 APPENDIX I: COUPLING REACTION, STANDARD OPERATING PROCEDURE

6.1 Procedure

The reactive distillation was run according the procedure-described *in-extenso* at chapter 3.1.3 Standard operating procedure, page 18, paragraphs 14, 15 and 16. An example of the data collected during the batch N°7 is provided in Table 6, page 31. Input data needed to run properly the reactive distillation are given in Table 7, page 34 and on Figure 9, page 34.

6.2 Copy of the records

Table 6: copy of the data collected during methanol reactive distillation for coupling reaction, batch N°7

time (hr:min)	elapsed time (hr:min)	reduced pressure (mm)	mass temperature (°F)	column head temperature (°F)	reflux flow (lb/min)	volume in V5314 (°B)	mass MeOH distillate (lb)	comments
03:40	00:00	180	140,4	85,0	-	-	-	
04:05	00:25	178	135,0	88,7	-	-	-	
04:08	00:28	179	135,0	90,3	25,0	0,3	10	
04:15	00:35	180	136,0	88,7	20,1	0,5	71	
04:20	00:40	180	136,0	88,1	15,0	-	-	
04:26	00:46	180	137,0	87,8	16,0	1,0	150	Change setpoint on reflux flow from 15 to 10 lb/min
04:30	00:50	180	137,7	87,9	10,0	-	-	
04:40	01:00	180	137,0	87,9	8,0	2,0	289	
04:50	01:10	180	137,0	87,9	8,0	4,2	366	
04:55	01:15	180	137,0	87,9	5,0	8,5	405	
05:00	01:20	180	137,0	87,8	8,0	8,0	455	
05:05	01:25	180	137,0	87,9	8,0	12,0	554	
05:10	01:30	180	138,8	87,7	8,0	17,0	634	
05:15	01:35	180	138,5	87,7	8,0	-	-	
05:20	01:40	180	138,5	87,7	8,0	21,0	777	
05:25	01:45	180	140,0	87,7	8,0	24,0	851	
05:30	01:50	180	141,0	87,8	8,0	27,0	925	
05:35	01:55	180	141,0	87,8	8,0	30,7	1 009	End of the sodium methoxide dosing step
05:40	02:00	180	142,8	87,8	8,0	32,8	1 050	Beginning of the reduced pressure ramp
05:45	02:05	170	143,8	81,3	14,0	36,0	-	
05:50	02:10	165	145,0	84,7	18,0	37,7	1 200	
05:55	02:15	156	145,1	82,2	22,0	38,5	1 223	
06:05	02:25	-	136,0	78,0	18,0	38,0	1 223	
06:20	02:40	110	128,4	68,9	18,0	38,8	1 223	
06:30	02:50	91	128,0	65,5	1,4	39,0	1 232	
06:35	02:55	80	123,0	62,1	1,4	44,5	1 347	
06:40	03:00	70	119,0	58,0	1,4	47,5	1 421	
06:50	03:10	60	118,0	55,0	1,4	53,6	1 570	
07:00	03:20	51	118,7	50,0	1,4	68,4	1 844	
07:15	03:35	48	122,8	104,9	0,7	69,7	1 735	End of the reduced pressure ramp
07:25	03:45	60	126,3	110,9	0,9	63,4	1 800	

The three following figures (Figure 6: mass balance on the column head exchanger and Figure 7: trends for the main parameters involved in the methanol reactive distillation, page 32 and Figure 8: trends for the main parameters involved in the methanol reactive distillation, page 33) illustrate clearly the trends for the main parameters involved in the distillation. Each time the column head temperature deflects from its theoretical value, the reflux flow L [lbs/min] is increased gradually until the column head temperature reaches the target value.

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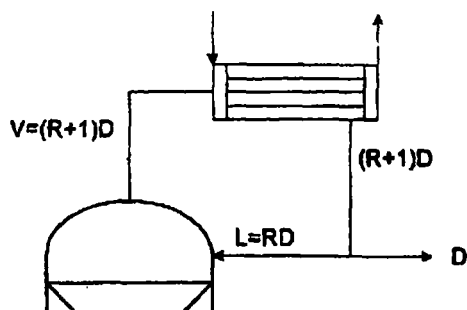


Figure 6: mass balance on the column head exchanger

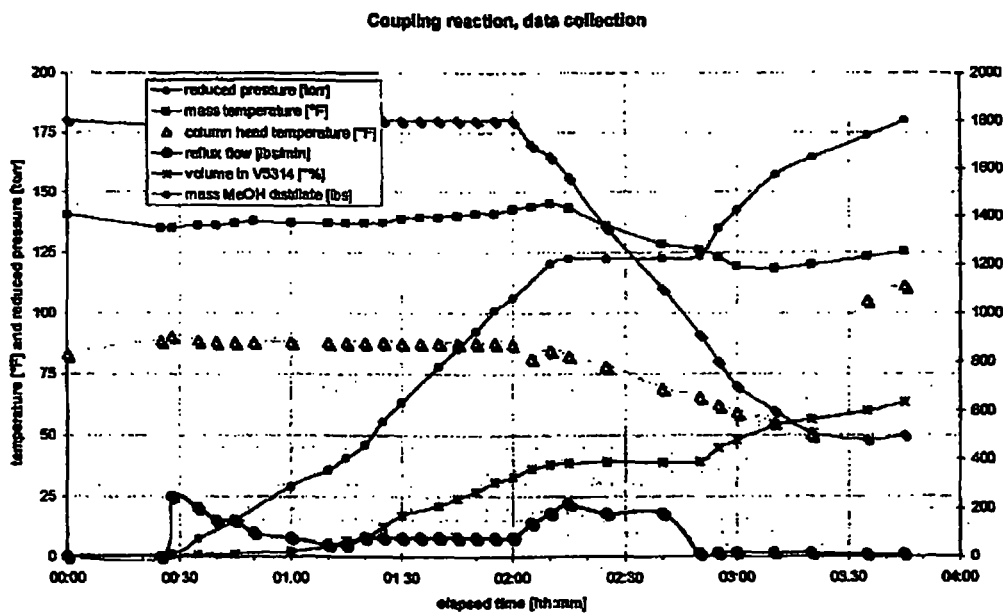


Figure 7: trends for the main parameters involved in the methanol reactive distillation

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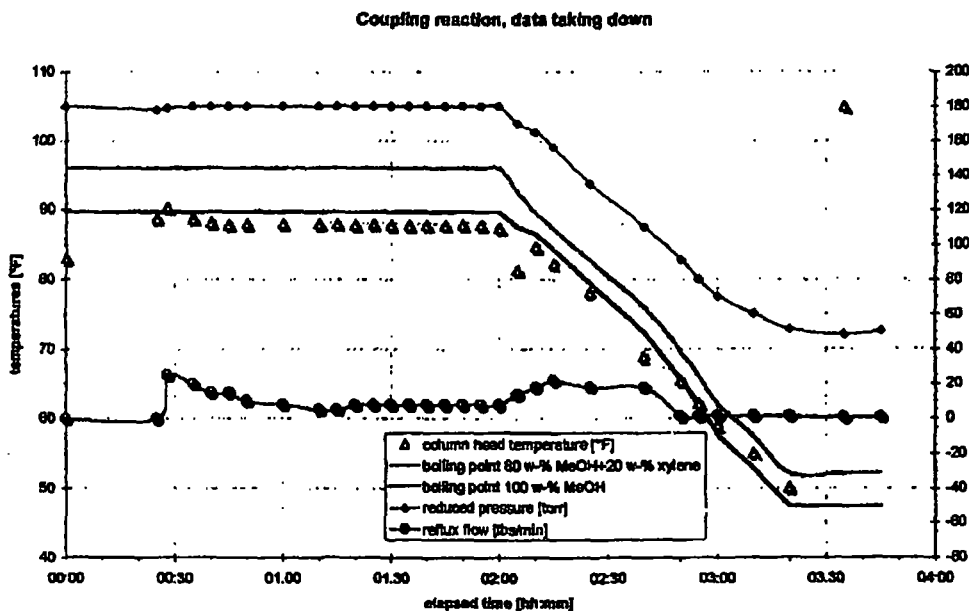


Figure 8: trends for the main parameters involved in the methanol reactive distillation

To run the reactive distillation properly, the column head temperature trend should always best fit with the red curve (theoretical boiling point value for 100 w-% methanol under the known reduced pressure).

Such kind of control can be easily achieved by increasing the reflux flow L [lbs/min] as a function of the elapsed time (see values in Table 6, page 31) each time a temperature drift is observed. This correction is easy to realise until the reduced pressure is up to 100 torr.

As the pressure is reduced, there is less and less methanol to distil, so there is no methanol in required amount to maintain the overhead temperature at the target value, even when the reflux flow is increased. We observed this phenomenon when the reduced pressure is down to 80~100 torr. The overhead temperature drifts from the red curve and is located between the red curve (100% methanol) and the grey curve (85 w-% methanol and 15 w-% xylene). Obviously, some xylene is now took-off, but there is no other solution to perform this distillation and bring the reaction to completion with respect to the limiting cycle time. A compromise between good yields and xylene contents in the methanol distillate has to be found.

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6.3 Miscellaneous data

6.3.1 Evolution of the boiling points for some methanol – xylene mixtures

Table 7: evolution of the boiling points [°F] for some methanol – xylene binary mixtures as a function of the reduced pressure [torr]

reduced pressure [torr]	theoretical column head temperature [°F]					
	pure MeOH	MeOH+xylene 2 weight-% (0,61% molaire)	MeOH+xylene 5 weight-% (1,56% molaire)	MeOH+xylene 10 weight-% (3,25% molaire)	MeOH+xylene 20 weight-% (7,0% molaire)	MeOH+xylene 30 weight-%
200	93,4	93,5	93,6	93,9	96,0	107,5
180	91,5	91,8	91,7	92,1	94,2	
160	89,5	89,6	89,7	90,1	92,3	
170	87,5	87,5	87,7	88,0	90,3	
160	85,3	85,4	85,5	85,8	88,3	
150	83,0	83,1	83,2	83,5	86,1	
140	80,6	80,7	80,8	81,1	83,8	
130	78,0	78,1	78,2	78,5	81,4	
120	75,3	75,3	75,5	75,8	78,8	
110	72,3	72,4	72,5	72,8	76,0	
100	69,1	69,2	69,3	69,6	72,9	58,8
90	65,7	65,7	65,8	66,1	69,6	
80	61,9	61,9	62,0	62,3	66,0	
70	57,8	57,7	57,8	58,1	62,0	
60	52,8	52,8	53,0	53,2	57,4	
50	47,2	47,3	47,4	47,7	52,2	
40	40,6	40,7	40,8	41,0	45,9	

6.3.2 Diagrams

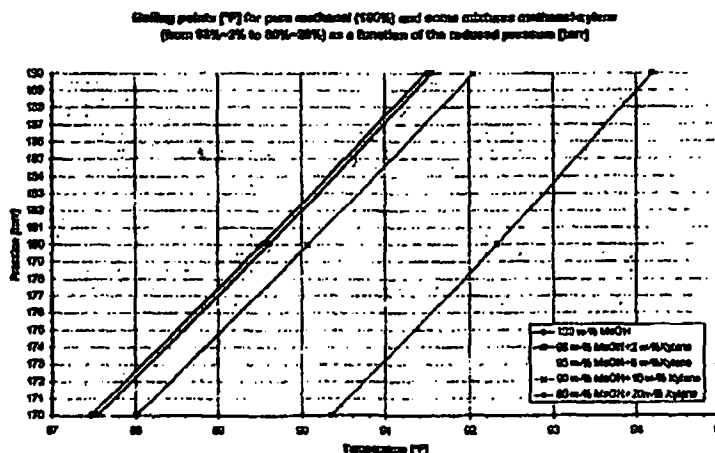


Figure 8: boiling points for some methanol – xylene binary mixtures as a function of the reduced pressure

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7 APPENDIX II: CYCLE TIME, BOTTLENECK OF THE PROCESS

7.1 Analysis

The data presented in Table 8 (see below) and diagrams presented on Figure 10, page 36, were computed assuming a pure/pure cyclanilide yield equal to 85.0%. Residence times were determined from the data collected in the batch manufacturing report.

Table 8: Input data and determination of the bottleneck step of the process

Equipments	Main sections	Function	Full storage capacity [m ³]	Maximum volume [m ³]	Max. operating volume [m ³]	Potential duration (real) [h]	Theoretical duration [h]	Margin [h]	Equipments filling rate [%]
TS213	stage 1	sodium methoxide storage tank	37,3	38,0	1,1	0,5	0,5	-	3%
RS104	stage 1	coupling reactor	10,9	8,1	7,9	13,9	10,8	2,5	67%
VS304	stage 1	coupling distillate receiver	1,9	1,8	1,2	3,3	3,3	-	63%
RS101	stage 1	hydrolysis reactor	13,2	8,9	8,2	10,3	8,1	1,3	66%
VS311	stage 2	aqueous layer intermediate storage	11,4	10,8	4,8	1,9	1,3	-	42%
TS214	stage 2	organic layer intermediate storage	84,4	61,1	4,2	4,3	5,3	-	7%
VS301	stage 2	hydrolysis receiver	1,9	1,8	0,2	8,1	8,1	-	11%
RS103	stage 3	precipitation reactor	11,4	9,7	8,1	3,8	3,8	-	45%
VS312	stage 3	centrifuge feed tank	18,9	18,0	8,1	5,8	8,0	0,8	27%
TS208	stage 3	mother liquors hold tank "A"	13,1	14,4	3,5	7,5	7,5	-	23%
TS209	stage 3	washing liquors hold tank "B"	13,1	14,4	3,2	7,0	7,0	-	21%
CF5701	stage 3	centrifuge	-	-	-	5,8	6,7	1,2	---
DF100	stage 3	dryer	-	-	-	19,8	19,8	-	---
TS202	stage 4	crude water storage tank	70,7	71,9	7,8	30,0	30,0	-	10%
IS-4502	stage 4	water recovery	-	-	-	12,0	12,0	-	---
TS217	stage 4	recycled water storage tank	43,4	43,2	8,2	39,0	39,0	-	14%
TS214	stage 5	organic recovery hold tank	84,4	61,1	10,3	45,0	48,0	-	18%
RS105	stage 5	xylylene recovery pot	13,1	12,1	10,3	10,0	10,0	-	68%
TS216	stage 5	recovered xylene storage	43,4	43,2	9,4	38,0	38,0	-	21%

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7.2 Diagrams

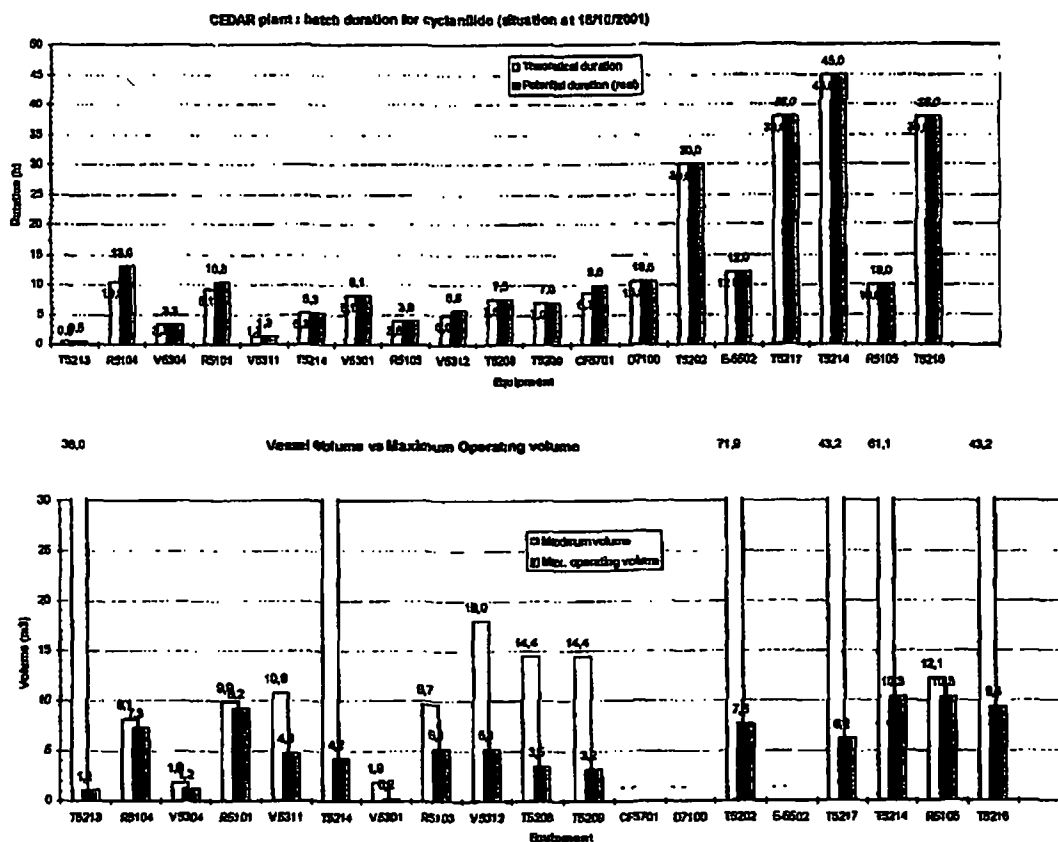


Figure 10: residence times and maximum volume for the apparatus

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7.3 Conclusion

Cyclanilide monthly production efficiency in CEDAR West-Helena facilities can reach 140 kbs/month (84 T/month) assuming a reliability rate of 100% and a cyclanilide yield = 85.0%, or 119 kbs/month (54 T/month) assuming a reliability rate of 85% (equivalent to 4.0 kbs/day or 1.8 T/day).

Bottleneck of the process is stage 1, "coupling reaction".

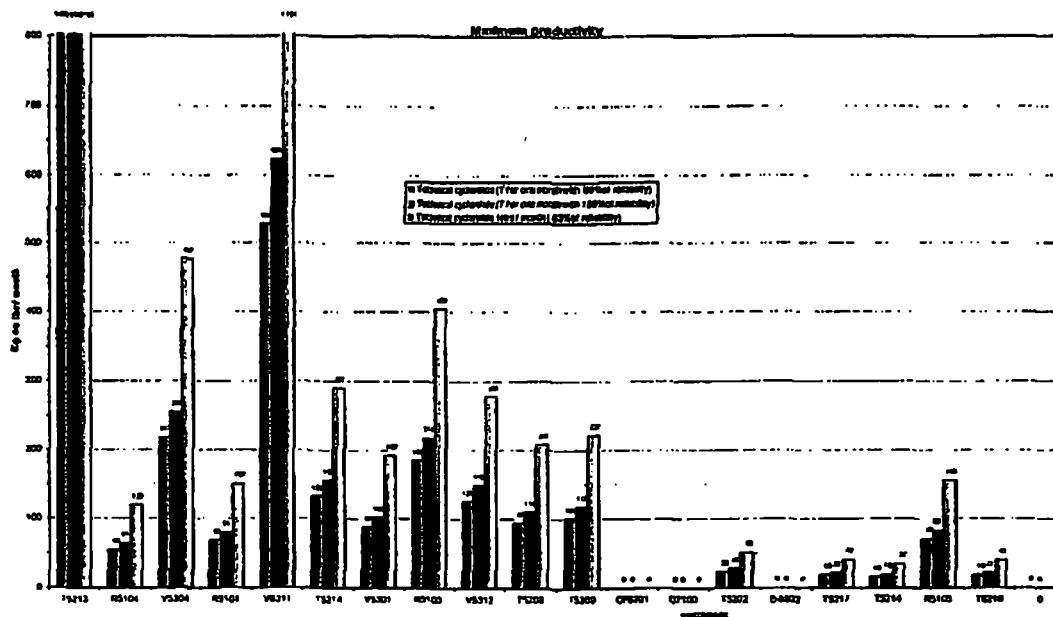


Figure 11: monthly and yearly production efficiency assuming various reliability rates

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8 APPENDIX III: CHEMICAL REACTION DATA

8.1 Summary table for main results

Data (mass, volume, analytical results) were collected for each batch. These data and those computed thereafter from the previous one were summarised in Table 9. Some trends were drawn from these values, see Figure 12: trends for the chemistry selectivity parameters concerning stage 1, page 39 for stage 1 and Figure 13: trends for the chemistry selectivity parameters concerning stage 2, page 40 for stage 2.

Table 9: summary of the main figures for chemistry understanding purpose

Batch number	DCA conversion (balance)	DCA conversion (sample)	DCA conversion (mean value)	Ester measured yield	Ester conversion	Cyclanilide measured yield	Wet cake	Cyclanilide A.I. yield	MeONa dosing period	MeOH distillation period	distillation time
02	84,4%	84,6%	84,5%	72,1%	100,0%	72,1%	74,0%	73,1%	2:30	3:00	8:00
03	97,0%	97,8%	97,4%	76,3%	98,5%	74,8%	78,9%	77,1%	0:50	3:55	4:45
04	98,8%	99,6%	99,7%	78,9%	98,9%	78,6%	88,7%	77,1%	1:00	3:40	4:40
05	97,1%	97,8%	97,5%	82,6%	98,2%	81,8%	71,8%	71,0%	1:30	3:30	5:00
06	97,3%	98,6%	98,0%	80,0%	100,0%	80,0%	85,9%	85,0%	1:30	3:20	4:50
07	97,1%	97,3%	97,2%	84,1%	100,0%	84,1%	98,1%	93,1%	2:00	1:30	3:30
08	82,1%	87,6%	86,0%	85,4%	100,0%	85,4%	94,4%	83,5%	1:50	2:05	3:55
09	98,7%	98,3%	97,5%	82,2%	100,0%	82,2%	78,1%	72,4%	1:45	2:10	3:55
10	99,9%	99,4%	94,6%	85,7%	99,9%	85,6%	85,6%	82,7%	1:40	2:05	3:45
11	95,2%	98,9%	96,0%	85,5%	100,0%	85,5%	85,5%	88,7%	1:35	2:10	4:25

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8.2 Diagrams and trends

8.2.1 Stage 1, coupling reaction

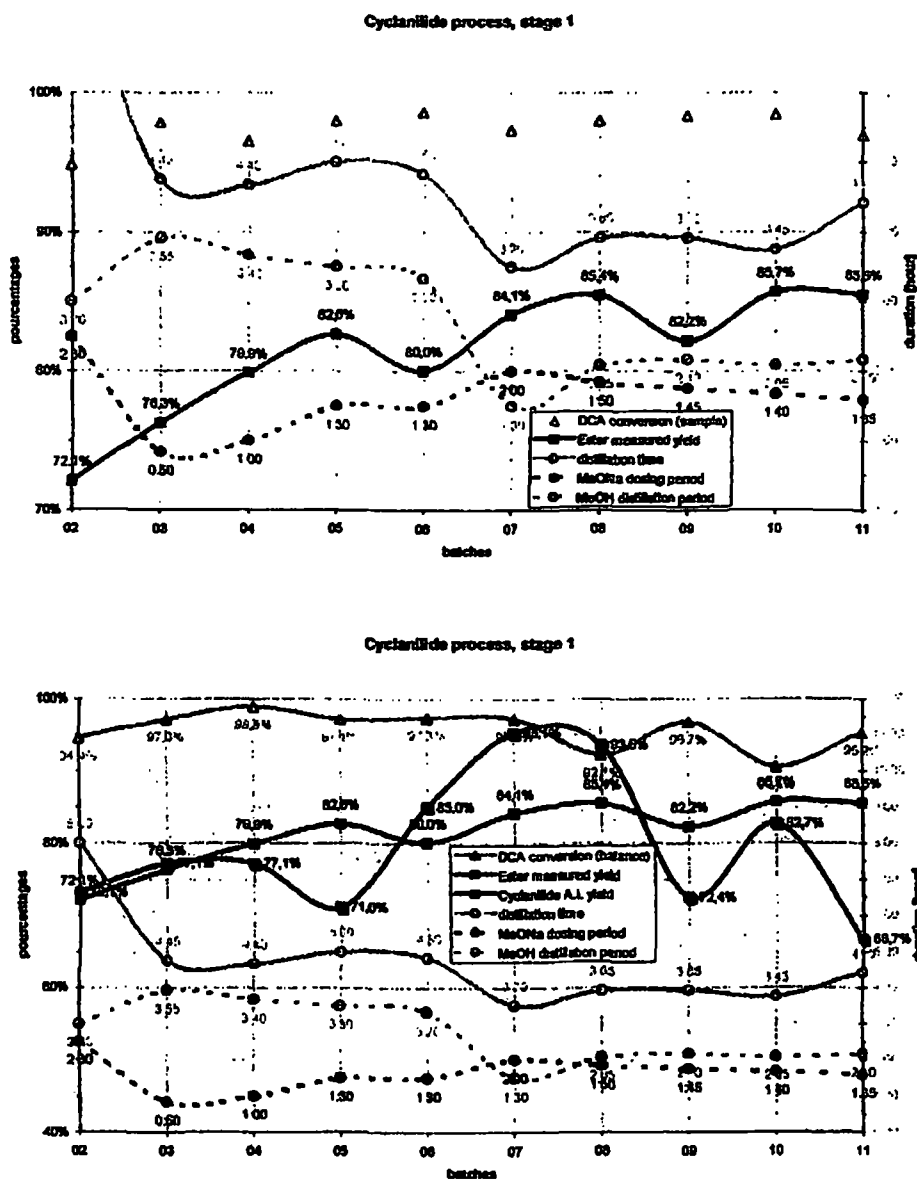


Figure 12: trends for the chemistry selectivity parameters concerning stage 1

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8.2.2 Stage 2, hydrolysis reaction

Cyclanilide process: improvements on stage 1 and stage 2

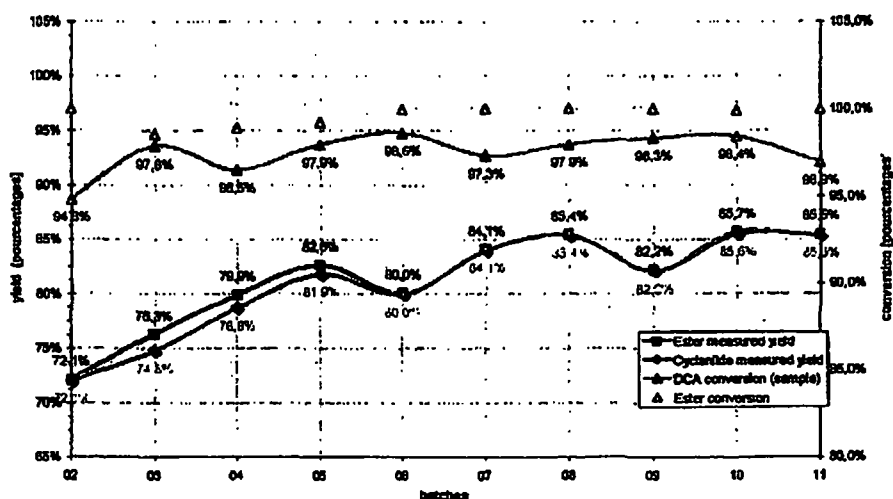


Figure 13: trends for the chemistry selectivity parameters concerning stage 2

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9 APPENDIX IV: PROCESS DATA

9.1 Summary table for the main figures

Data (mass, volume, analytical results) were collected in Table 10 for each batch. Some trends were drawn from these values, see Figure 14: trends for the process parameters concerning stage 1, page 42 for stage 1 and Figure 15: trends for the process parameters concerning stage 2, page 43 for stage 2.

Table 10: summary of the main figures for process

Batch number	DCA loaded per batch	CPDM loaded per batch	xylene loaded per batch	Dehydration distillate mass [lbs]	xylene make up per batch	Coupling distillate mass [lbs]	Mass of water	Mass of water loaded into R4	Hydrolysis distillate mass [lbs]	Aqueous layer mass [lbs]	Organic layer mass [lbs]
02	1 784	1 783	8 000	2 010	1 010	1 780	6 350	2 450	1 480	11 610	7 190
03	1 784	1 782	8 000	331	-	1 788	6 350	2 450	1 425	12 060	6 600
04	1 783	1 782	8 000	651	-	1 850	6 350	2 450	1 170	11 360	5 990
05	1 787	1 785	8 000	660	-	1 712	6 350	2 450	1 015	11 260	8 740
06	1 784	1 780	8 000	1 743	740	1 743	6 350	2 450	1 400	11 750	7 450
07	1 770	1 783	8 038	1 160	160	1 838	6 350	2 450	730	11 720	6 820
08	1 783	1 748	8 000	970	-	1 869	6 350	2 450	980	11 780	8 660
09	1 672	1 770	8 000	1 362	362	1 755	6 350	2 450	2 275	10 360	6 390
10	1 743	1 788	8 080	780	-	1 840	6 350	2 450	1 420	11 450	8 750
11	1 783	1 780	8 000	1 450	450	2 250	6 350	2 450	1 780	11 280	6 500

mean	1 783	1 758	8 004	1 142	272	1 837	6 350	2 450	1 386	11 484	6 901
st. dev	80	10	11	511	363	155	-	-	448	474	819

Batch number	formic acid mass [lbs]	estimated mass for aqueous layer	Wet cyclanilide mass [lbs]	Mothers liquors	Washed liquors	Dry cyclanilide mass [lbs]	Cyclanilide Assay [%]	To aqueous recovery	To organic recovery	Waste effluent to burn
02	900	12 710	2 440	12 488	4 607	2 198	98,7%	18 273	9 200	3 210
03	972	13 032	2 697	12 746	4 607	2 310	99,0%	17 262	8 931	3 223
04	945	12 338	2 281	12 364	4 607	2 330	99,0%	16 871	8 641	3 028
05	943	12 203	2 387	11 948	4 607	2 132	98,0%	16 468	8 400	2 727
06	949	12 888	2 816	12 332	4 607	2 647	99,7%	18 838	9 183	3 133
07	1 000	12 720	3 357	12 223	4 607	2 660	98,0%	18 730	7 960	2 588
08	942	12 722	2 986	12 524	4 607	2 600	99,0%	17 431	7 850	2 618
09	900	11 280	2 218	11 100	4 607	2 068	99,0%	15 607	7 762	4 050
10	-	11 480	2 720	11 178	4 607	2 848	99,0%	15 423	7 630	3 483
11	-	11 280	2 220	11 038	4 607	1 898	99,0%	15 648	7 650	4 030

mean	745	12 229	2 603	11 682	4 607	2 366	99,0%	16 488	8 043	3 223
st. dev.	396	656	374	648	-	287	0,1%	648	984	500

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9.2 Diagrams and trends

9.2.1 Stage 1, coupling reaction

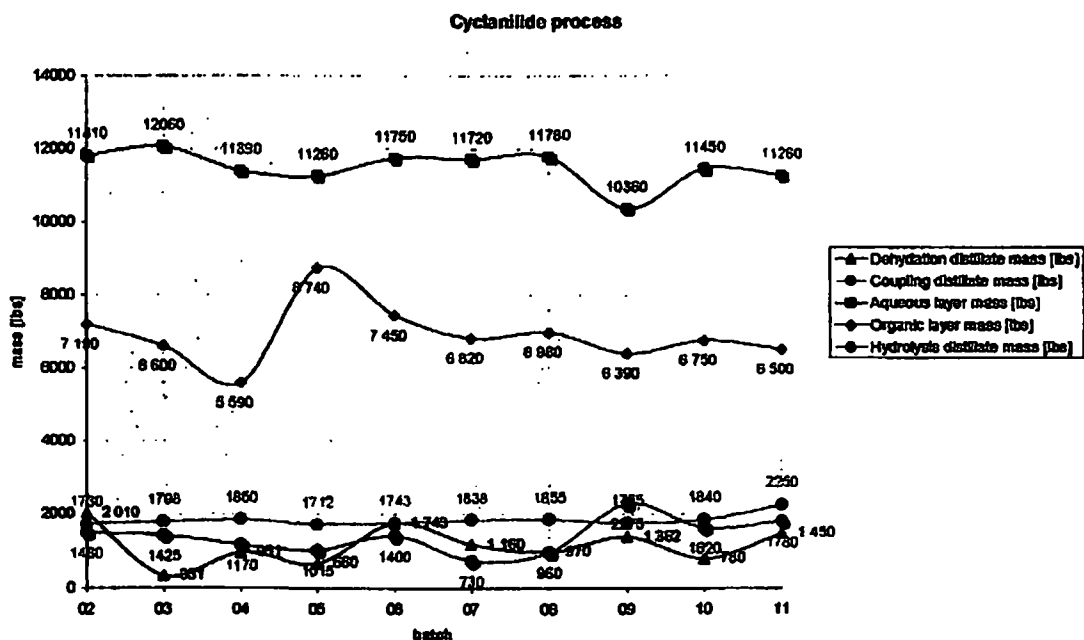


Figure 14: trends for the process parameters concerning stage 1

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9.2.2 Stage 2, hydrolysis reaction

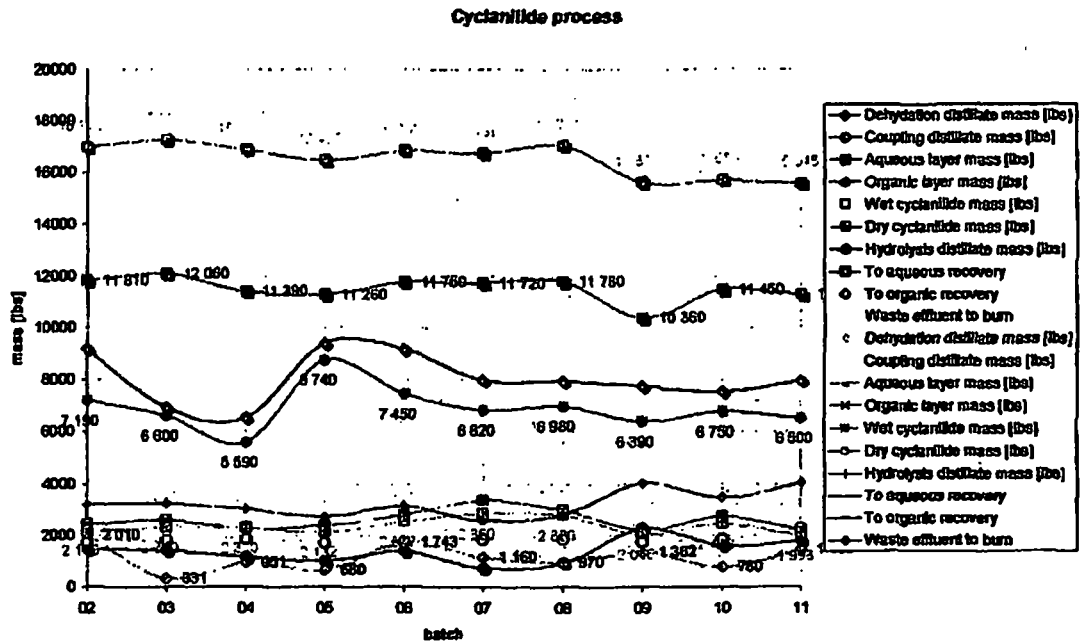


Figure 15: trends for the process parameters concerning stage 2



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10 APPENDIX V: COPIES OF SELECTED BATCH MANUFACTURING REPORT

10.1 Standard operating procedure for batch N°8

Cyclanilide Coupling Batch Sheet

Batch 008 Date 12-12-01

Verify the following:

A. ☒ Hothouse temperature 185 - 195 F

B. ☒ There are enough materials for a full charge.

C. ☒ Steam trace on R-5104 bottom head

D. ☒ Scrubber is operating at normal conditions.

E. ☒ Vacuum pump is operating properly.

Pressure Test R-5104 system OK ☒ Vacuum test R-5104 system OK ☒

Place a pallet of melted 2,4 DCA on the scales and record the weight of the full drums.

Charge 1,763 lbs (800 kg) of 2,4 DCA to R-5104. Record the lot # of each drum.

Start Time 1315 Finish Time 1300 Drum Lots 575/41 575/19 575/40 213/92

R4 Start Wt. 900 End Wt. 1010 Empty Pallet Wt. 274 Total DCA Charge 1763 lbs

Purge the reactor with nitrogen. Start Time 1305 Finish Time 1315

Charge 8,000 lbs (1,110 gal) of xylene to R-5104. Mix for 10 minutes then sample.

Start Time 1315 Finish Time 1335 Xylene Totalizer 1110 gal Sample Time 1345

R4 Start Wt. 1100 End Wt. 10150 %Xylene %DCA

Purge the reactor with nitrogen. Lower the pressure in R-5104 to 70 mmHg. Begin heating the reactor to distill off water. Place the column on total reflux for 15 minutes to allow column to come to equilibrium while maintaining level at 25%. Begin take-off of xylene and water until overhead temperature reaches 150-165 F. Record the readings on the attached distillation log every 15 minutes.

Start Time

Cool R-5104 to 140-145 F. Start Time 1310 Finish Time 1335 Start Temp 187 Finish Temp 146

Charge 1,763 lbs (800 kg) of CPDM to R-5104. Record the lot # of each drum.

Start Time 1340 Finish Time 2040 Drum Lots 2001/64V 2001/83V 2001/87V 2000/648V

R4 Start Wt. 12070 End Wt. 17340 Full Pallet Wt. 2001 Empty Wt. 253 Total Charge 1748

Mix R-5104 for 10 minutes, then sample. Sample Time 2050 %Xylene %DCA

Pull vacuum on R-5104 to a pressure of 180 mmHg. Start Time 2230 Finish Time 2200

Charge 2,220 lbs of sodium methoxide to V-5307. Start Time 2200 Finish Time 2005 V-5307 Level 40.2

Verify that the temperature in R-5104 is 135-140 F, then begin charging sodium methoxide to R-5104 at a rate of 18.5 lb/min. Start Time 2230

As the sodium methoxide is added, methanol will begin to distill. Place the column on total reflux with a level of 25% in the receiver. When the overhead temperature stabilizes at 89.5-90.0 F, begin take-off of methanol to V-5314. Adjust reflux to maintain overhead temperature at 89.5-90.0 F. Record the reading on the attached distillation log every 15 minutes.

When no more methanol is coming over, as evidenced by a constant reflux flow and 0% output on the level controller, place the pressure controller in ramp mode and adjust the setpoint to 50 mmHg. Use the vapor pressure curve and adjust the reflux flow to maintain the proper overhead temperature during the ramp. Ramp Start Time 2450

When no more methanol is coming over, as evidenced by a constant reflux flow and 0% output on the level controller, close the reflux valve. The overhead temperature will initially increase and then drop off as the remaining methanol is stripped from the column. Break vacuum with nitrogen to 760 mmHg.

Distillation Complete Time 0255

Sample the reactor to determine the reaction completion. Sample Time 0310 %Mester %DCA 52

Charge 0,350 lbs of water to R-5104. Start Time 0320 Finish Time 0340 R4 Start Wt. 10720 End Wt. 17070

Agitate for 30 minutes, the settle for 1 hour. Settle Start Time 0415 Finish Time 0515

Transfer the batch to R-5101. Start Time 0515 Finish Time 0610 R4 Start Wt. 14060 End Wt. 270 R1 Start Wt. 0 End Wt. 17610

Transfer V-5314 back to R-5104 to flush the reactor, then transfer to the waste tank. Start Time 0615 Finish Time 0625



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Cyclanilide Coupling Batch Sheet

Time	R-5104 Weight	R-4 Steam Flow	R-5104 Temp	R-5104 Press	C-5104 Top Temp	C-5104 Press	V-5315 Level	V-5314 Level	Reflux Flow	NaOle Flow	Initials
1430	10910	NA	111.6	86	104.43	76	0	0	0	0	DS
1515	9500	NA	175.5	70	84.73	69	15.9	-0.7	35.0	0	CL
1530	8550	NA	174.2	66	131.8	70	12.0	-0.7	0	0	CL
1545	8150	NA	175.9	99	142.0	71	18.5	5.5	27.2	0	CL
1600	8020	NA	175.0	102	135.9	70	10.1	6.9	35.0	0	CL
1615	9680	NA	174.9	104	137.3	71	12.6	10.1	23.4	0	CL
1630	8690	NA	175.2	103	142.3	70	10.3	15.3	21.4	0	CL
1645	8300	NA	175.8	98	145.0	61	9.6	16.5	20.2	0	CL
1700	7200	NA	180.9	145	148.2	162	5.6	12.0	12.0	0	CL
2250	10120	0	140.8	265	73.3	200	37.2	11.6	72.70	90%	DS
2300	1110	0	143.9	190	84.0	170	0	0	72.90	90%	DS
2315	1770	NA	138.1	200	103.3	180	12.7	0	16.4	76.1	DS
2330	17040	NA	139.1	202	88.10	180	29.6	0	17.8	74.7	DS
2345	12000	NA	139.1	208	88.10	180	10.1	5.5	10.1	82	DS
2400	12410	NA	138.1	208	88.3	182	9.9	13.2	10.1	82	DS
2415	10850	NA	140.8	206	88.1	180	10.0	28.2	8.4	82	DS
2430	10020	NA	147.9	205	88.1	180	10.1	37.8	8.3	82	DS
2445	11520	NA	142.1	194	85.8	177	10	43.8	4.3	0	DS
0100	11670	NA	139.0	176	81.9	159	5	44.1	8.0	0	DS
0115	11070	NA	137.4	154	76.7	130	10.9	48.0	18.5	0	DS
0130	11180	NA	132.1	120	82.6	84	10.1	49.8	18.2	0	DS
0145	11400	NA	121.6	94	57.1	71	7.2	48.8	12.5	0	DS
0200	10910	NA	117.3	93	56.7	70	11.0	48.8	0	0	DS
0215	9570	NA	115.4	89	56.0	70	9.9	53.5	0	0	DS
0230	9240	NA	120.2	88	55.6	70	9.9	60.2	0	0	DS
0245	9640	NA	125.7	88	70	70	9.9	64.5	0	0	DS



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Cyclanilide Hydrolysis Batch Sheet

Batch 008 Date 12-12-01

Verify the following:

A. R-5101 empty and bottom valve closed. <input checked="" type="checkbox"/>	C. Scrubber is operating at normal conditions. <input checked="" type="checkbox"/>
B. Coupling batch complete and ready for transfer. <input checked="" type="checkbox"/>	D. Vacuum pump is operating properly. <input checked="" type="checkbox"/>

Pressure Test R-5101 system OK. ☒ Vacuum test R-5101 system OK. ☒

Transfer the batch from R-5104 to R-5101. Start R-5101 agitator.

Charge 2,450 lbs of water to R-5101.

Start Time 0655 Finish Time 0700 R1 Start Wt. 17540 End Wt. 19990

Purge the reactor with nitrogen. Start Time 0700 Finish Time 0710

Slowly reduce the pressure in R-5101 to 115 mmHg. Monitor the sight glass for signs of foaming. Start Time 0710 Finish Time 0810

Open the steam to the R-5101 jacket and begin heating to 140 F. AS the reactor heats, methanol will distill off, condense in E-5301B and collect in V-5307B.

When the level in V-5307B reaches 25%, place the column on total reflux. When the temperature reaches 140 F, begin 3 hour hold period.

Record the readings on the attached sheet every 15 minutes. Hold Time Start 0810

When the hold period is complete, adjust the pressure setpoint to 100 mmHg. Begin Take-off of methanol to the Waste Organic Truck.

Continue recording readings every 15 minutes. Distill Start Time 0825

When distillation is complete, shut off reflux and break vacuum to 780 mmHg. Distill Finish Time 1030

Shut off agitator and allow the batch to settle for 1 hour. Start Time 1035 Finish Time 1135

Verify that there are filter elements in the filter in the transfer line to R-5103, then transfer the aqueous layer. Leave "rag" layer in R-5101.

Sample the aqueous layer during the transfer.

Start Time <u>1140</u>	R1 Start Wt. <u>18900</u>	R3 Start Wt. <u>0</u>	Conductivity Start <u>670</u>
Finish Time <u>1240</u>	End Wt. <u>7120</u>	End Wt. <u>11910</u>	Conductivity Finish <u>670</u>
Sample Time <u>1145</u>	Ester% <u>0</u>	DCA% <u>138</u>	Cyclanilide% <u>81.5</u>

Transfer the organic layer to T-5214. Sample the aqueous layer during the transfer.

Start Time <u>1210</u>	R1 Start Wt. <u>7120</u>	T-5214 Start Level <u>17.4</u>
Finish Time <u>1225</u>	End Wt. <u>40</u>	End Level <u>23.3</u>
Sample Time <u>1215</u>	Ester% <u>0</u>	DCA% <u>134</u>

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CYCLANILIDE PROCESS COMMISSIONING
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 Clast. : RP/IND/DAP/333/2002/0002/DS
 Sender. : STEPHAN D., PARDIGON O., BERROD G., HERNO B.
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Cyclanilide Hydrolysis Batch Sheet

Time	R-6101 Weight	R-6101 Temp	C-6501 Top Temp	C-6501 Press	V-6307B Level	Reflux Flow	Comments
0510	20030	140.4	134.4	208	20.1	3.8	Reflux Start
0530	20030	138.4	132.2	198	22.5	3.3	
0550	20030	136.4	130.2	188	25.0	3.0	
0525	20030	142.3	136.5	221	22.3	3.5	Reflux start
0545	20140	141.1	132.8	208	20.0	3.7	
0600	20150	139.1	128.2	196	14.8	3.4	
0615	20050	139.1	129.3	203	14.9	3.3	
0630	20050	137.8	137.9	201	13.8	2.3	
0645	20620	139.7	128.3	195	18.0	3.0	
0700	20610	139.3	127.7	193	18.2	3.1	
0730	20870	140.7	128.2	191	28.0	3.6	
0743	20980	139.5	123.4	191	25.8	3.6	
0810	20030	140.1	127.6	197	23.8	3.4	
0823	20050	139.4	129.5	195	20.8	3.8	3 hrs reflux end
0845	19910	140.4	134.1	197	27.1	2.0	
0900	19806	140.6	134.8	195	21.7	1.1	
0915	19620	139.5	134.7	196	24.6	1.6	
0930	19480	140.6	135.9	199	25.2	1.6	
0945	19300	139.6	135.1	193	25.4	1.4	
1000	19130	139.7	135.2	194	26.2	1.6	
1015	18980	140.5	135.8	193	25.3	1.5	
1030	19010	146.0	141.1	218	27.6	2.2	



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10.2 Standard operating procedure for batch N°10

Cyclanilide Coupling Batch Sheet

Batch 10 Date 12-15-01

Verify the following:

A. Hothouse temperature 185 - 196 F ☒ MT

B. There are enough materials for a full charge ☒ MT

C. Steam trace on R-5104 bottom head ☒ MT

D. Scrubber is operating at normal conditions. ☒ MT

E. Vacuum pump is operating properly. ☒ MT

Pressure Test R-5104 system OK. ☒ Vacuum test R-5104 system OK. ☒ Full Pallet Wt. 1324 lbs

Place a pallet of melted 2,4 DCA on the scales and record the weight of the full drums.

Charge 1,763 lbs (800 kg) of 2,4 DCA to R-5104. Record the lot # of each drum.

Start Time 1750 Finish Time 1835 Drum Lots 0159 0159 0159 0159

R4 Start Wt. 570 End Wt. 570 Empty Pallet Wt. N/A lbs Total DCA Charge 1763 lbs

Purge the reactor with nitrogen. Start Time 1835 Finish Time 1840

Charge 8,000 lbs (1,110 gal) of xylene to R-5104. Mix for 10 minutes then sample.

Start Time 1845 Finish Time 1900 Xylene Totalizer 1110 gal

R4 Start Wt. 570 End Wt. 10190 Sample Time N/A %Xylene N/A %DCA N/A

Purge the reactor with nitrogen. Lower the pressure in R-5104 to 70 mmHg. Begin heating the reactor to distill off water. Place the column on total reflux for 15 minutes to allow column to come to equilibrium while maintaining level at 25%. Begin take-off of xylene and water until overhead temperature reaches 150-165 F. Record the readings on the attached distillation log every 15 minutes. Start Time 2000

Cool R-5104 to 140-145 F Start Time 2230 Finish Time 2300 Start Temp 176.1 Finish Temp 149

Charge 1,763 lbs (800 kg) of CPDM to R-5104. Record the lot # of each drum.

Start Time 2335 Finish Time 2415 Drum Lots 2000/68V 2000/68V 2000/68V 2000/68V

R4 Start Wt. 11890 End Wt. 3480 Full Pallet Wt. 2015 Empty Wt. 260 Total Charge 1755

Mix R-5104 for 10 minutes, then sample. Sample Time 2425 %Xylene N/A %DCA N/A

Pull vacuum on R-5104 to a pressure of 160 mmHg. Start Time 2445 Finish Time 0100

Charge 2,220 lbs of sodium methoxide to V-5307. Start Time 2455 Finish Time 2430 V-5307 Level 40"

Verify that the temperature in R-5104 is 135-140 F, then begin charging sodium methoxide to R-5104 at a rate of 18.5 lb/min. Start Time 0105

As the sodium methoxide is added, methanol will begin to distill. Place the column on total reflux with a level of 25% in the receiver. When the overhead temperature stabilizes at 89.5-90.0 F, begin take-off of methanol to V-5314. Adjust reflux to maintain overhead temperature at 89.5-90.0 F. Record the reading on the attached distillation log every 15 minutes.

When no more methanol is coming over, as evidenced by a constant reflux flow and 0% output on the level controller, place the pressure controller in ramp mode and adjust the setpoint to 50 mmHg. Use the vapor pressure curve and adjust the reflux flow to maintain the proper overhead temperature during the ramp. Record the reading on the attached distillation log every 15 minutes. Ramp Start Time 0330

When no more methanol is coming over, as evidenced by a constant reflux flow and 0% output on the level controller, close the reflux valve. The overhead temperature will initially increase and then drop off as the remaining methanol is stripped from the column. Break vacuum with nitrogen to 760 mmHg.

Distillation Complete Time 0450

Sample the reactor to determine the reaction completion. Sample Time N/A %Xylene N/A %DCA N/A

Charge 6,350 lbs of water to R-5104. Start Time 0500 Finish Time 0510 R4 Start Wt. 11890 End Wt. 17540

Agitate for 30 minutes, then settle for 1 hour. Settle Start Time 0540 Finish Time 0640

Transfer the batch to R-5101. Start Time 0625 Finish Time 0710 R1 Start Wt. 20 End Wt. 17870

R4 Start Wt. 18610 End Wt. 240 Start Time 0625 Finish Time 0710

Transfer V-5314 back to R-5104 to flush the reactor, then transfer to the waste truck.



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Cyclanilide Coupling Batch Sheet

Time	R-5104 Weight	R-4 Steam Flow	R-5104 Temp	R-5104 Press	C-5104 Top Temp	C-5104 Press	V-5315 Level	V-5314 Level	Reflux Flow	NaOMe Flow	Initials
1930	10000	NA	144.6	91	73	75	8	8	8	8	BS
1945	9120	NA	144.0	95	137	64	8	8	8	8	BS
2000	8000	NA	183	105	87.4	68	36.9	8	81.5	8	BS
2015	5770	NA	177.2	101	110	70	—	—	21.3	8	BS
2030	2810	—	176.6	801	100	68	12.3	8	21.2	—	BS
2040	CUT REFUSE TO 14665	—	176.4	105	125.5	71	10.7	10.0	23.0	—	BS
2100	8610	NA	176.4	104	140.5	71	10.5	17.1	22.7	—	BS
2115	8350	NA	176.4	104	140.5	71	10.5	17.1	22.7	—	BS
2130	9100	NA	177.4	104	140.5	71	17.7	28.5	22.3	—	BS
2145	8100	NA	178.0	105	151.5	71	14.3	30.5	22.8	—	BS
2200	1000	NA	176.1	102	151.4	70	11.7	32.1	20.2	—	BS
2210	10760	NA	182.6	105.204	110.8	135	-4	-7	8	82.1	BS
2230	10700	NA	182.6	207	85.4	175	18.3	-7	24.8	85.1	BS
2245	10400	NA	186.1	210	83.1	180	5.4	-7	25.1	85.1	BS
2250	10780	NA	188.0	210	85.2	181	10.0	1.0	8.0	85.1	BS
2315	10880	NA	184.6	209	85.2	180	10.0	1.0	8.0	85.1	BS
2330	11050	NA	171.0	207	85.2	181	5.9	25.3	8.2	85.1	BS
2340	10760	—	182.7	207.117	86.6	68	9.7	48.7	18.0	8	BS
2355	9890	—	187.6	121	74.5	82	9.1	47.9	18.0	—	BS
0030	10050	—	185.5	103	68	78	2	43.1	13.1	—	BS
0045	10540	—	18.4	73	53.1	88	10.2	51.1	8	—	BS
0050	10020	—	112.5	68	49.5	50	9.3	55.8	8	—	BS
0115	11010	—	114.7	68	48.4	50	10.0	52.4	10	—	BS
0130	10980	—	119.2	68	48.4	50	10.4	61.7	10	—	BS
0145	10890	—	121.8	68	71.55	50	9.8	62.5	10	—	BS
0150	10420	—	120.5	68	71.55	50	9.8	62.5	10	—	BS



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Cyclanilide Hydrolysis Batch Sheet

Batch	10	Date	12-16-01
Verify the following:			
A. R-6101 empty and bottom valve closed.	<input checked="" type="checkbox"/>	C. Scrubber is operating at normal conditions.	<input checked="" type="checkbox"/>
B. Coupling batch complete and ready for transfer	<input checked="" type="checkbox"/>	D. Vacuum pump is operating properly.	<input checked="" type="checkbox"/>
Pressure Test R-6101 system OK.	<input checked="" type="checkbox"/>	Vacuum test R-6101 system OK.	<input checked="" type="checkbox"/>
Transfer the batch from R-5104 to R-6101. Start R-6101 agitator.			
Charge 2,450 lbs of water to R-6101.			
Start Time	0730	Finish Time	0735
R1 Start WL	17580	End WL	20030
Purge the reactor with nitrogen.			
Start Time	0735	Finish Time	0745
Slowly reduce the pressure in R-6101 to 115 mmHg. Monitor the sight glass for signs of foaming.			
Start Time	0745	Finish Time	0825
Open the steam to the R-6101 jacket and begin heating to 140 F. AS the reactor heats, methanol will distill off, condense in E-5501B and collect in V-6307B. When the level in V-6307B reaches 25%, place the column on total reflux. When the temperature reaches 140 F, begin 3 hour hold period. Record the readings on the attached sheet every 15 minutes.			
Hold Time Start	0830		
When the hold period is complete, adjust the pressure setpoint to 100 mmHg. Begin Take-off of methanol to the Waste Organic Truck. Continue recording readings every 15 minutes.			
Distill Start Time	11:52	0830	
When distillation is complete, shut off reflux and break vacuum to 780 mmHg.			
Distill Finish Time	11:30		
Shut off agitator and allow the batch to settle for 1 hour.			
Start Time	1355	Finish Time	1355
Verify that there are filter elements in the filter in the transfer line to R-6103, then transfer the aqueous layer. Leave 'rag' layer in R-6101.			
Sample the aqueous layer during the transfer.			
Start Time	1400	R1 Start WL	18100
Finish Time	1430	End WL	6850
Sample Time	1415	R3 Start WL	05
		End WL	11830
		Conductivity Start	N/A
		Conductivity Finish	N/A
		DCA%	
		Cyclanilide%	
Transfer the organic layer to T-6214. Sample the aqueous layer during the transfer.			
Start Time	1430	R1 Start WL	6850
Finish Time	1445	End WL	100
Sample Time	1440	T-6214 Start Level	19.7
		End Level	26.8
		DCA%	
		Cyclanilide%	



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Cyclanilide Hydrolysis Batch Sheet

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10.3 Standard operating procedure for batch N°11

Cyclanilide Coupling Batch Sheet

Batch 11 Date 12-16-01

Verify the following:

- A. Hotchase temperature 185 - 195 F
- B. There are enough materials for a full charge.
- C. Steam trace on R-5104 bottom head
- D. Scrubber is operating at normal conditions.
- E. Vacuum pump is operating properly.

Pressure Test R-5104 system OK ☒ Vacuum test R-5104 system OK ☒

Place 4 pallet of melted 2.4 DCA on the scales and record the weight of the full drums.

Charge 1,763 lbs (800 kg) of 2.4 DCA to R-5104. Record the lot # of each drum.

Drum Lot	Start Time	Finish Time	Empty Pallet Wt.	Total DCA Charge
01-34	0800	0840	N/A	1763

Purge the reactor with nitrogen.

Start Time	Finish Time
0840	0945

Charge 6,000 lbs (1,110 gal) of xylene to R-5104. Mix for 10 minutes then sample.

Start Time	Finish Time	Xylene Totalizer	%Xylene	%DCA
0945	0940	0	N/A	N/A

Purge the reactor with nitrogen. Lower the pressure in R-5104 to 70 mmHg. Begin heating the reactor to distill off water. Place the column on total reflux for 15 minutes to allow column to come to equilibrium while maintaining level at 25%. Begin take-off of xylene and water until overhead temperature reaches 160-155 F. Record the readings on the attached distillation log every 15 minutes.

Start Time	Finish Time	Start Temp	Finish Temp
1025	1435	177.4	190.0

Cool R-5104 to 140-145 F

Start Time	Finish Time
1435	1550

Charge 1,763 lbs (800 kg) of CPDM to R-5104. Record the lot # of each drum.

Drum Lot	Start Time	Finish Time	Empty Wt.	Total Charge
2001/931	1550	1630	2090	1790

Mix R-5104 for 10 minutes, then sample.

Sample Time	%Xylene	%DCA
1600		

Pull vacuum on R-5104 to a pressure of 180 mmHg.

Start Time	Finish Time
1635	1830

Charge 2,220 lbs of sodium methoxide to V-5307.

Start Time	Finish Time	V-5307 Level
1830	2010	40"

Verify that the temperature in R-5104 is 135-140 F, then begin charging sodium methoxide to R-5104 at a rate of 18.5 lb/hr.

As the sodium methoxide is added, methanol will begin to distill. Place the column on total reflux with a level of 25% in the receiver. When the overhead temperature stabilizes at 89.5-90.0 F, begin take-off of methanol to V-5314. Adjust reflux to maintain overhead temperature of 89.5-90.0 F. Record the reading on the attached distillation log every 15 minutes.

When no more methanol is coming over, as evidenced by a constant reflux flow and 0% output on the level controller, place the pressure controller in ramp mode and adjust the setpoint to 50 mmHg. Use the vapor pressure curve and adjust the reflux flow to maintain the proper overhead temperature during the ramp. Record the reading on the attached distillation log every 15 minutes.

When no more methanol is coming over, as evidenced by a constant reflux flow and 0% output on the level controller, close the reflux valve. The overhead temperature will initially increase and then drop off as the remaining methanol is stripped from the column. Break vacuum with nitrogen to 700 mmHg.

Distillation Complete Time 2015

Sample the reactor to determine the reaction completion.

Sample Time	%Ester	%DCA
2025		

Charge 6,350 lbs of water to R-5104.

Start Time	Finish Time	R4 Start Wt.	End Wt.
2025	2045	10130	14480

Agitate for 30 minutes, then settle for 1 hour.

Settle Start Time	Finish Time	BOTTLE START TIME
2045	2130	2130

Transfer the batch to R-5101.

Start Time	Finish Time	R1 Start Wt.	End Wt.
2130	0105		17260

Transfer V-5314 back to R-5104 to flush the reactor, then transfer to the waste truck.

Start Time	Finish Time
0105	0115



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Cyclanilide Coupling Batch Sheet

Time	R-5104 Weight	R-4 Steam Flow	R-5104 Temp	R-5104 Press	C-5104 Top Temp	C-5104 Press	V-5315 Level	V-5314 Level	Reflux Flow	NaOMe Flow	Initials
10:25	10250	N/A	172.1	97	172.5	70	7.5	8	22.0	0	Ac
10:40	10150	N/A	175.7	98	166.5	69	12.9	0	15	0	Ac
10:55	10050	N/A	177.0	109	119.3	69	15.1	0	17.0	0	MT
11:10	9920	N/A	180.0	100	144	70	12.4	0	26.0	0	MT
11:25	9770	N/A	175.9	99	132	68	9.0	0	22.2	0	MT
11:40	9620	N/A	176.6	98	157.2	68	10.5	19.1	20.0	0	Ac
12:00	8990	N/A	176.1	98	138.7	69	10.5	21.8	18.7	0	Ac
12:15	8770	N/A	172.6	99	145.8	70	9.7	31.2	12.5	0	Ac
12:30	8060	N/A	176.1	99	147.7	70	9.9	36.2	17.4	0	Ac
12:35	4500	N/A	177.6	100	148.7	70	8.0	38.6	17	0	Ac
12:50	V305	Hand	Hand	Hand	V314	Hand	Hand	Hand	Shut-off	Down	Ac
13:00	10300	N/A	187.6	201	92.2	140	0	0	0	72	Ac
13:45	9790	N/A	186.4	203	93.2	184	0	0.3	0	80%	JS
14:00	11090	N/A	188.3	205	100.0	179	9.1	0.4	22.2	80%	JS
14:15	10730	N/A	184.6	210	88.31	178	10.5	3.4	2.1	81%	JS
14:30	10500	N/A	189.2	215	88.70	181	9.8	19.1	8.7	80%	JS
14:45	11170	N/A	190.8	211	88.83	179	9.7	32.9	8.8	85%	JS
20:00	11780	N/A	186.5	204	87.77	179	9.0	38.2	8.4	85%	JS
20:15	12040	N/A	188.0	196	85.94	170	9.9	40.6	17.1	0	JS
20:30	11880	N/A	187.8	190	79.81	139	10.1	44.1	17.6	0	JS
20:45	10340	N/A	172.0	145	71.68	109	10.4	51.7	17.5	0	JS
21:00	10200	N/A	175.2	113	65.50	81	9.9	58.0	17.8	0	JS
21:15	10110	N/A	182.5	96	57.28	68	9.9	60.4	17.7	0	JS
21:30	9910	N/A	184.9	98	55.84	67	10.1	63.7	0	0	JS
21:45	9650	N/A	186.3	86	51.57	64	10.1	71.5	0	0	JS
22:00	9530	N/A	187.7	80	54.30	64	9.8	73.5	0	0	JS
22:10	9570	N/A	Stop	Stop	Stop	Stop	10.0	74.4	0	0	JS



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Cyclanilide Hydrolysis Batch Sheet

Batch 11 Date 12/10/01

Verify the following:

A. R-5101 empty and bottom valve closed. ☒ C. Scrubber is operating at normal conditions. ☒
B. Coupling batch complete and ready for transfer. ☒ D. Vacuum pump is operating properly. ☒
Pressure Test R-5101 system OK. ☒ Vacuum test R-5101 system OK. ☒

Transfer the batch from R-5104 to R-5101. Start R-5101 agitator.

Charge 2,450 lbs of water to R-5101.
Start Time 0105 Finish Time 0105 R1 Start Wt. 17280 End Wt. 19730

Purge the reactor with nitrogen. Start Time 0105 Finish Time 0115

Slowly reduce the pressure in R-5101 to 445 mmHg. Monitor the sight glass for signs of foaming. Start Time 0115 Finish Time 0145

Open the steam to the R-5101 jacket and begin heating to 140 F. As the reactor heats, methanol will distill off, condense in E-5301B and collect in V-5307B.

When the level in V-5307B reaches 25%, place the column on total reflux. When the temperature reaches 140 F, begin 3 hour hold period.

Record the readings on the attached sheet every 15 minutes. Hold Time Start 0150

When the hold period is complete, adjust the pressure setpoint to 100 mmHg. Begin Take-off of methanol to the Waste Organic Truck.

Continue recording readings every 15 minutes. Distill Start Time 0450

When distillation is complete, shut off reflux and break vacuum to 760 mmHg. Distill Finish Time 0545

Shut off agitator and allow the batch to settle for 1 hour. Start Time 0555 Finish Time 0700

Verify that there are no elements in the filter in the transfer line to R-5103, then transfer the aqueous layer. Leave "rag" layer in R-5101.

Settle the aqueous layer during the transfer.

Start Time 0700 R1 Start Wt. 17860 R3 Start Wt. 0 Conductivity Start NA
End Time 0720 End Wt. 610 End Wt. 11260 Conductivity Finish NA
Sample Time 0710 Ester% DCAS% Cyclanilide%

Transfer the organic layer to T-5214. Sample the aqueous layer during the transfer.

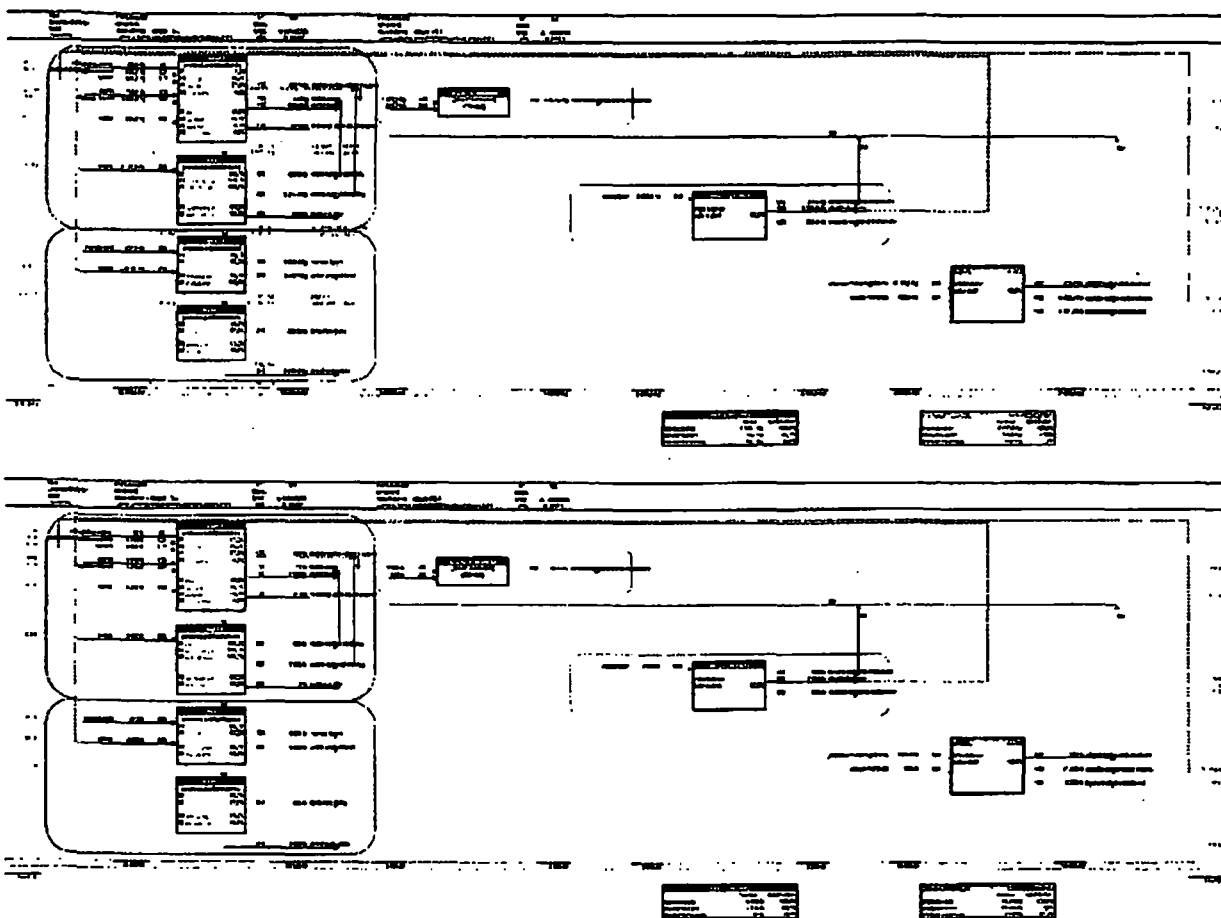
Start Time 0720 R1 Start Wt. 6710 T-5214 Start Level 25.3
Finish Time 0740 End Wt. 206 End Level 37.6
Sample Time 0730 Ester% DCAS% Cyclanilide%

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11 COHERENT MASS BALANCE

11.1 Global flow chart diagrams:





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12 APPENDIX VI: BIBLIOGRAPHY

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3. Minutes of start-up of cyclanilide, D. STEPHAN, 22/01/2001.

Cyclanilide Produced

From: 1/2 To: 2/1

5170										
Date Entered	Date Started	Bx#	Wet Cake Used	Chunk Drs Used	Bx No Charged	No Drums	Cyclanilide Lbs Prod	Chunk Drs Prod	Chunk material on hand	Misc
1/9/2002	12/29/2001	7811009	0	0		42	4,620	0	0	2chunk drs
1/9/2002	1/12/2002	7811010	7,276	0	22,23,24	0	0	0	0	
1/14/2002	1/12/2002	7811010	0	0		47	5,170	2,190	0	
1/14/2002	1/12/2002	7811011	5,619	2,190	25,26,28	0	0	0	0	
1/15/2002	1/12/2002	7811011	0	0		57	6,270	688	0	
1/15/2002	1/14/2002	7811012	8,800	688	29,30,31	0	0	0	0	
1/18/2002	1/14/2002	7811012	0	0		56	6,160	2,514	0	
1/18/2002	1/16/2002	7811013	6,380	2,514	17,27,32	0	0	0	0	wetcake chg 400lbs
1/21/2002	1/16/2002	7811013	0	0		70	7,700	916	0	
1/21/2002	1/19/2002	7811014	5,399	916	33,34	50	5,500	1,116	0	
1/21/2002	1/20/2002	7811015	5,962	1,116	35,36	0	0	0	0	
1/24/2002	1/20/2002	7811015	0	0		45	4,950	1,255	0	
1/24/2002	1/23/2002	7811016	6,538	1,255	37,38,&325lbs bx 04	0	0	0	0	
1/28/2002	1/23/2002	7811016	0	0		53	5,830	979	0	
1/28/2002	1/25/2002	7811017	4,742	0	62,63	29	3,190	0	0	
1/28/2002	1/27/2002	7811018	6,755	1,401	39,40&562lbs bx 04	0	0	0	0	
1/30/2002	1/27/2002	7811018	0	0		52	5,720	1,117	0	
1/30/2002	1/29/2002	7811019	7,027	1,117	41,42&562lbs bx 04	0	0	0	0	

Cyclanilide

Raw Materials Received

From 1/1

To 1/31

Date	RR	Supplier	Shipper	Container	Item No	Product	Qty	Misc
1/4/2002	19828	Aventis	Blackhawk	1815	1	CPDM	34,398	78drs@200kgs ea
1/14/2002	19871	Aventis	Blackhawk	1299	1	CPDM	34,398	78drs@200kgs ea
1/25/2002	19924	Aventis	Blackhawk	1816	1	CPDM	34,398	78drs@200kgs ea
Total by Item:							103,194	
1/18/2002	19897	Aventis	Wright Dist	994802	2	2, 4 DCA	35,264	64drs@250kgs ea
1/28/2002	19936	Aventis	Jacobson Transport	01652	2	2, 4 DCA	35,264	64@ 250kgs ea
Total by Item:							70,528	
1/4/2002	19827	Aventis	Chickasaw	EXFU380265-3	3	Sodium Methoxide	43,980	
1/16/2002	19883	Aventis	Boasso America Cor	ICTU240190-3	3	Sodium Methoxide	43,820	
1/26/2002	19930	Aventis	Gulf States	BVIU424045-2	3	Sodium Methoxide	43,540	
Total by Item:							131,340	
1/22/2002	19910	Russell-Stanley	Trans Carriers	6231	4	Mt 30 gal drums	495	
Total by Item:							495	
1/8/2002	19836	Cone Solvents	Cone Solvents	850	41200	Xylene	45,800	
1/25/2002	19923	Exxon Mobile	Unibulk	3920202	41200	Xylene	45,520	
Total by Item:							91,320	
1/1/2002	19810	Brenntag	Fed Ex		46240	Formic Acid	4,360	8drs@545lbs ea
1/3/2002	19822	Brenntag	Brenntag	45803	46240	Formic Acid	17,985	33drs@545lbs ea
1/11/2002	19862	Vopak	Conway Transport	4960530	46240	Formic Acid	5,250	10drs@525lbs ea
1/16/2002	19882	Brenntag	American Freightway	P13263	46240	Formic Acid	4,360	8drs@545lbs ea
1/17/2002	19890	Brenntag	Brenntag	45803	46240	Formic Acid	17,440	32@545lbs ea
1/24/2002	19916	Brenntag	Brenntag	45803	46240	Formic Acid	21,800	40drs@545lbs ea
Total by Item:							71,195	

Monday, February 04, 2002

Propanil Production by Period by Batch From 1/2 To 2/1

Started	Bx No	DCA	P Acid	P Anhy	P Tech
2/31/2001	C121218	0	4,500	0	25,340
1/2/2002	C012001	19,100	14,500	0	28,240
1/2/2002	C012002	19,100	15,895	0	25,390
1/3/2002	C012003	19,100	13,095	0	25,180
1/6/2002	C012004	19,110	8,900	0	25,350
1/6/2002	C012005	19,080	12,075	0	25,200
1/7/2002	C012006	19,100	12,820	0	26,150
1/7/2002	C012007	19,100	11,450	0	25,100
1/9/2002	C012008	19,100	12,490	0	25,580
1/10/2002	C012009	19,100	12,500	0	25,250
1/10/2002	C012010	19,100	14,815	0	25,690
1/11/2002	C012011	19,100	14,645	0	25,530
1/11/2002	C012012	19,100	15,750	0	25,530
1/12/2002	C012013	19,100	15,545	0	25,430
1/12/2002	C012014	19,100	14,860	0	25,940
1/13/2002	C012015	19,100	14,785	0	25,590
1/13/2002	C012016	19,100	14,375	0	25,410
1/14/2002	C012017	19,100	17,460	0	25,830
1/14/2002	C012018	19,100	14,115	0	25,340
1/15/2002	C012019	19,100	13,580	0	25,530
1/15/2002	C012020	19,100	11,815	0	25,490
1/16/2002	C012021	19,135	14,265	0	25,450
1/16/2002	C012022	19,100	13,470	0	25,370
1/18/2002	C012023	19,100	14,925	0	25,400
1/18/2002	C012024	19,100	14,100	0	25,160
1/19/2002	C012025	19,100	13,960	0	25,860
1/19/2002	C012026	19,100	13,435	0	25,330
1/20/2002	C012027	19,100	14,160	0	25,600
1/20/2002	C012028	19,100	13,860	0	25,920
1/21/2002	C012029	19,100	15,165	0	25,590

<i>Started</i>	<i>Bx No</i>	<i>DCA</i>	<i>P Acid</i>	<i>P Anhy</i>	<i>P Tech</i>
1/21/2002	C012030	19,100	12,725	0	25,470
1/22/2002	C012031	19,100	12,240	0	25,610
1/22/2002	C012032	19,100	14,560	0	25,460
1/23/2002	C012033	19,085	13,185	0	26,010
1/23/2002	C012034	19,100	13,890	0	25,280
1/24/2002	C012035	19,100	12,695	0	25,800
1/24/2002	C012036	19,100	11,285	0	25,020
1/25/2002	C012037	19,085	12,335	0	25,570
1/26/2002	C012038	19,100	12,030	0	24,910
1/26/2002	C012039	19,100	11,885	0	25,920
1/27/2002	C012040	19,100	11,575	0	25,610
1/27/2002	C012041	19,110	13,330	0	25,720
1/28/2002	C012042	19,100	12,050	0	25,480
1/28/2002	C012043	19,100	9,890	0	25,440
1/29/2002	C012044	19,100	13,305	0	25,480
1/31/2002	C012045	19,100	12,670	0	0
1/31/2002	C012046	19,100	14,670	0	0
Report Totals:		878,605	621,630	0	1,148,550 ✓
		3020	40200	40300	3000

Monday, February 04, 2002

Propanil Formulated Products for the Period From 1/2 To 2/1

Date	Ex No	Type	P Tach	MFO	Inopharone	Malicrate	Ondram	49 Kmsd	W/S Kmsd	Aromatic B	Armsd	Isoph/MIBK	Sum Od	Stam Bulb	30 Bulb	40 Bulb	Flake	RiceSole	Arrowsole	66 Malicrate
1/11/2002	FL01210-01	Flake	10,500	0	0	0	0	0	0	0	0	0	0	0	0	0	10,500	0	0	0
1/14/2002	FL01210-01	Flake	28,500	0	0	0	0	0	0	0	0	0	0	0	0	0	28,500	0	0	0
1/14/2002	FL01212-01	Flake	39,000	0	0	0	0	0	0	0	0	0	0	0	0	0	39,000	0	0	0
1/15/2002	FL01214-01	Flake	9,000	0	0	0	0	0	0	0	0	0	0	0	0	0	9,000	0	0	0
1/16/2002	FL01214-01	Flake	22,500	0	0	0	0	0	0	0	0	0	0	0	0	0	22,500	0	0	0
1/16/2002	FL01215-01	Flake	7,500	0	0	0	0	0	0	0	0	0	0	0	0	0	7,500	0	0	0
1/17/2002	FL01216-01	Flake	30,000	0	0	0	0	0	0	0	0	0	0	0	0	0	30,000	0	0	0
1/17/2002	FL01216-02	Flake	9,000	0	0	0	0	0	0	0	0	0	0	0	0	0	9,000	0	0	0
1/21/2002	FL01218-01	Flake	37,500	0	0	0	0	0	0	0	0	0	0	0	0	0	37,500	0	0	0
1/21/2002	FL01219-01	Flake	21,000	0	0	0	0	0	0	0	0	0	0	0	0	0	21,000	0	0	0
1/21/2002	FL01218-02	Flake	40,500	0	0	0	0	0	0	0	0	0	0	0	0	0	40,500	0	0	0
1/21/2002	FL01220-01	Flake	9,000	0	0	0	0	0	0	0	0	0	0	0	0	0	9,000	0	0	0
1/22/2002	FL01220-01	Flake	21,000	0	0	0	0	0	0	0	0	0	0	0	0	0	21,000	0	0	0
1/22/2002	FL01221-01	Flake	33,000	0	0	0	0	0	0	0	0	0	0	0	0	0	33,000	0	0	0
1/24/2002	FL01221-01	Flake	1,500	0	0	0	0	0	0	0	0	0	0	0	0	0	1,500	0	0	0
1/24/2002	FL01223-01	Flake	42,000	0	0	0	0	0	0	0	0	0	0	0	0	0	42,000	0	0	0
1/24/2002	FL01223-02	Flake	42,000	0	0	0	0	0	0	0	0	0	0	0	0	0	42,000	0	0	0
1/24/2002	FL01223-01	Flake	19,500	0	0	0	0	0	0	0	0	0	0	0	0	0	19,500	0	0	0
1/25/2002	FL01223-01	Flake	21,000	0	0	0	0	0	0	0	0	0	0	0	0	0	21,000	0	0	0
1/25/2002	FL01224-01	Flake	21,000	0	0	0	0	0	0	0	0	0	0	0	0	0	21,000	0	0	0
1/28/2002	FL01225-01	Flake	39,000	0	0	0	0	0	0	0	0	0	0	0	0	0	39,000	0	0	0

Date	Bl. No	Type	P Tech	MO	Imp/Parma	Minimate	Ordram	48 Band	Wit Band	Aromatic B	Arenal	Isoph/MIBK	Sea Oil	Stam Bulk	3d Bulk	4d Bulk	Plate	Rice/Solo	Arrozado	6d Melmate
1/28/2002	FL01225-02	Flake	25,500	0	0	0	0	0	0	0	0	0	0	0	0	0	25,500	0	0	0
1/28/2002	FL01226-01	Flake	22,500	0	0	0	0	0	0	0	0	0	0	0	0	0	22,500	0	0	0
1/28/2002	FL01226-02	Flake	28,500	0	0	0	0	0	0	0	0	0	0	0	0	0	28,500	0	0	0
1/28/2002	FL01227-01	Flake	13,500	0	0	0	0	0	0	0	0	0	0	0	0	0	13,500	0	0	0
1/28/2002	FL01227-01	Flake	28,500	0	0	0	0	0	0	0	0	0	0	0	0	0	28,500	0	0	0
1/28/2002	FL01228-01	Flake	7,500	0	0	0	0	0	0	0	0	0	0	0	0	0	7,500	0	0	0
1/30/2002	FL01228-01	Flake	31,500	0	0	0	0	0	0	0	0	0	0	0	0	0	31,500	0	0	0
1/30/2002	FL01229-01	Flake	18,500	0	0	0	0	0	0	0	0	0	0	0	0	0	18,500	0	0	0
1/31/2002	FL01229-01	Flake	4,500	0	0	0	0	0	0	0	0	0	0	0	0	0	4,500	0	0	0
1/31/2002	FL01230-01	Flake	24,000	0	0	0	0	0	0	0	0	0	0	0	0	0	24,000	0	0	0
1/31/2002	FL01230-02	Flake	15,000	0	0	0	0	0	0	0	0	0	0	0	0	0	15,000	0	0	0
2/1/2002	FL01230-02	Flake	13,500	0	0	0	0	0	0	0	0	0	0	0	0	0	13,500	0	0	0
2/1/2002	FL01231-02	Flake	27,000	0	0	0	0	0	0	0	0	0	0	0	0	0	27,000	0	0	0

Sub Totals:	✓ 759,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	759,000	0	0	0
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1/18/2002	48	42,340	31,000	7,760	0	0	0	9,680	0	0	0	0	0	0	0	10,222	0	0	0	0
1/18/2002	48	41,530	29,450	7,380	0	0	0	9,680	0	0	0	0	0	0	0	9,890	0	0	0	0
1/18/2002	48	42,330	29,430	7,380	0	0	0	9,680	0	0	0	0	0	0	0	9,890	0	0	0	0
1/18/2002	48	41,540	29,480	7,380	0	0	0	9,680	0	0	0	0	0	0	0	9,892	0	0	0	0
1/18/2002	48	24,920	17,680	5,120	0	0	0	5,820	0	0	0	0	0	0	0	8,016	0	0	0	0
1/18/2002	48	41,530	29,450	8,760	0	0	0	9,680	0	0	0	0	0	0	0	10,047	0	0	0	0
1/18/2002	48	41,530	29,450	8,850	0	0	0	9,680	0	0	0	0	0	0	0	10,056	0	0	0	0
1/18/2002	48	20,785	15,605	3,880	0	0	0	4,940	0	0	0	0	0	0	0	5,056	0	0	0	0
1/18/2002	48	41,630	29,940	7,380	0	0	0	9,680	0	0	0	0	0	0	0	9,834	0	0	0	0

		Revenue	Unfunded	48 Bond	Wt Bond	Assessable B	Assess	Imp/Gr/SEIK	Gen Off	State Debt	30 Debt	40 Debt	Police	Rice/Bols	Armed	48 Military
1/18/2002	48	41,830	28,460	7,300	0	0	9,880	0	0	0	0	0	0	0	0	0
1/29/2002	48	18,580	6,480	2,880	0	0	3,610	0	0	0	0	0	0	0	0	0
Sub Totals:		353,135	280,215	74,040	0	0	91,810	0	0	0	0	0	94,517	0	0	0
Totals:		1,154,135	280,215	74,040	0	0	91,810	0	0	0	0	0	94,517	700,000	0	0
		3000	40000	48300	41700	43000	40010	40000	40900	41000	41600	3400	3300	3500	3820	3130

121.923
216.440

Tuesday, February 05,

Flake Tech Packaged From 1/2 To 2/1

Entered	Packed	Lot	3050	3060
			Flake Tech Used	25 Kg Packaged
1/11/2002	1/10/2002	FL10114-01	8,287	150
1/11/2002	1/10/2002	FL10131-01	2,756	50
1/14/2002	1/11/2002	FL10114-01	11,023	200
1/18/2002	1/14/2002	FL10114-01	7,496	138
1/18/2002	1/14/2002	FL10128-01	772	14
1/18/2002	1/15/2002	FL0111-01	10,747	195
1/18/2002	1/15/2002	FL1028-01	1,984	36
1/18/2002	1/15/2002	FL1029-01	3,252	59
1/21/2002	1/18/2002	FL0112-01	6,559	119
1/21/2002	1/18/2002	FL1115-01	1,709	31
1/22/2002	1/17/2002	FL10111-01	2,756	50
1/22/2002	1/17/2002	FL10112-01	8,287	150
1/22/2002	1/21/2002	FL10111-01	1,323	24
1/22/2002	1/21/2002	FL10118-01	3,858	70
1/22/2002	1/21/2002	FL11108-02	1,653	30
1/22/2002	1/21/2002	FL11114-01	1,433	26
1/22/2002	1/21/2002	FL11115-01	2,766	50
1/24/2002	1/22/2002	FL10115-01	2,701	49

<i>Entered</i>	<i>Packed</i>	<i>Lot</i>	<i>3050 Flake Tech Used</i>	<i>3060 25 Kg Packaged</i>
1/24/2002	1/22/2002	FL10118-01	3,187	58
1/24/2002	1/22/2002	FL10117-01	3,858	70
1/24/2002	1/22/2002	FL10118-01	551	10
1/24/2002	1/22/2002	FL11101-01	718	13
1/24/2002	1/23/2002	FL11101-01	3,913	71
1/24/2002	1/23/2002	FL11102-02	7,110	129
1/25/2002	1/24/2002	FL11102-02	3,197	58
1/25/2002	1/24/2002	FL11103-01	6,724	122
1/30/2002	1/25/2002	FL11103-01	2,756	50
1/30/2002	1/25/2002	FL11104-01	2,756	50
1/30/2002	1/28/2002	FL11101-01	8,083	110
1/30/2002	1/28/2002	FL11104-01	2,756	50
1/30/2002	1/28/2002	FL11111-01	2,756	50
1/30/2002	1/28/2002	FL11111-01	11,023	200
1/31/2002	1/30/2002	FL11111-01	993	18
1/31/2002	1/30/2002	FL11118-01	10,031	182
2/1/2002	1/31/2002		8,288	150
2/1/2002	1/31/2002	FL11111-01	2,150	39
2/1/2002	1/31/2002	FL11114-01	3,031	55
2/1/2002	1/31/2002	FL11117-01	5,842	106
2/1/2002	1/31/2002	FL11118-01	3,307	60

<i>Entered</i>	<i>Packed</i>	<i>Lot</i>	<i>3050 Flake Tech Used</i>	<i>3060 25 Kg Packaged</i>
			170,310 ✓	3,090 ✓

Corrected Production on Flake Tech in September for 236 bags that were produced in August that was never reported.

Ro-Neet Production

Tuesday, February 05, 2002

From: 1/2 To: 2/1

Entered	Date Started	Batch #	46270 Kerosene	3520 Cyclate	46350 AU-564	3490 Ro-Neet Gals Prod	Misc
1/25/2002	1/22/2002	9021001	5,500	20,288	1,211	3,600	
1/25/2002	1/22/2002	9021002	5,594	19,800	1,211	3,600	
1/25/2002	1/22/2002	9021003	5,500	19,800	1,211	3,600	
1/25/2002	1/24/2002	9021004	5,500	11,907	1,211	3,600	
1/28/2002	1/25/2002	9021005	5,744	20,085	1,211	3,600	
1/28/2002	1/27/2002	9021006	2,840	19,845	1,211	3,600	
2/1/2002	1/27/2002	9021007	5,500	19,845	1,211	3,600	
2/1/2002	1/27/2002	9021008	5,500	19,845	1,211	3,600	
2/1/2002	1/28/2002	9021009	5,500	19,845	1,211	3,600	
2/1/2002	1/29/2002	9021010	3,750	16,400	990	1,312	
2/1/2002	1/30/2002	9021011	3,750	16,400	990	1,312	
			54,878	204,038	12,879	35,024	

Ro-Neet Production

Tuesday, February 05, 2002

From: 1/2 To: 2/1

Entered	Date Started	Batch #	46270 Kerosene	3520 Cycolate	46350 AU-564	3490 Ro-Neet Gals Prod	Misc
1/25/2002	1/22/2002	9021001	5,500	20,286	1,211	3,600	
1/25/2002	1/22/2002	9021002	5,594	19,800	1,211	3,600	
1/25/2002	1/22/2002	9021003	5,500	19,800	1,211	3,600	
1/25/2002	1/24/2002	9021004	5,500	11,907	1,211	3,600	
1/28/2002	1/25/2002	9021005	5,744	20,065	1,211	3,600	
1/28/2002	1/27/2002	9021006	2,840	19,845	1,211	3,600	
2/1/2002	1/27/2002	9021007	5,500	19,845	1,211	3,600	
2/1/2002	1/27/2002	9021008	5,500	19,845	1,211	3,600	
2/1/2002	1/28/2002	9021009	5,500	19,845	1,211	3,600	
2/1/2002	1/29/2002	9021010	3,750	16,400	990	1,312	
2/1/2002	1/30/2002	9021011	3,750	16,400	990	1,312	
			54,678	204,038 F	12,879	35,024	

Ro-Neet Packaged

Tuesday, February 05, 2002

From 1/2 To: 2/1

<i>Date Entered</i>	<i>Date Started</i>	<i>3490 Bulk Gals Used</i>	<i>Mt Jugs Used</i>	<i>3500 2x2.5 Produced</i>
1/28/2002	1/25/2002	3,600	720	720
1/29/2002	1/26/2002	3,600	720	720
1/29/2002	1/26/2002	1,770	354	354
		8,970	1,794	1,794

Monday, February 04

4# Packaged by Period From 1/2 To 2/1

		3290	3310	3320	3330	3340	3300	42000	42210	42230	42300	42550
Period Packed Lot		4# 20L	4# 55	4# 210L	4# 200L	4# 35	4# Bulk	mt 20L	mt 35	mt 35	mt 55	mt Blk 55
1/18/2002	1/3/2002 PR401203-01	0	0	0	0	220	7,700	0	0	220	0	0
1/18/2002	1/4/2002 PR401204-04	0	0	0	0	310	10,850	0	0	310	0	0
1/18/2002	1/7/2002 PR401207-01	0	0	0	0	220	7,700	0	0	220	0	0
1/18/2002	1/8/2002 PR401208-01	0	0	0	0	325	11,375	0	0	325	0	0
1/18/2002	1/9/2002 PR401209-01	0	0	0	0	325	11,375	0	0	325	0	0
1/18/2002	1/10/2002 PR401210-01	0	0	0	0	205	7,175	0	0	205	0	0
1/18/2002	1/11/2002 PR401211-01	0	0	0	0	275	9,625	0	0	275	0	0
1/18/2002	1/14/2002 PR401214-01	0	0	0	0	305	10,675	0	0	305	0	0
1/18/2002	1/15/2002 PR401215-01	0	0	0	0	190	6,650	0	0	190	0	0
1/18/2002	1/16/2002 PR401216-01	0	0	0	0	300	10,500	0	0	300	0	0
1/22/2002	1/21/2002 PR401221-01	0	0	0	0	290	10,150	0	0	290	0	0
1/24/2002	1/22/2002 PR401222-01	0	0	0	0	285	9,975	0	0	285	0	0
1/25/2002	1/25/2002 PR401225-01	0	0	0	0	184	6,440	0	0	184	0	0
Period Total :		0	0	0	0	3,434	120,180	0	0	3,434	0	0

+ 2750
ADDED
From LAST
MTH

96,250 LAST MTH
216,440

LESS 285
SHOWN LAST MTH

2750 ACTUAL
3035 INVOICED
285

Cedar Chemical - West Helena
Griffin L.L.C.
Propanil 4#EC Production
For Period Ending:

12/3/2001

Date	3000 Propanil Tech Used	40400 M.O. Used	40500 Isophorone Used	40600 4# Emulsifier	4# Lbs Produced	4# Gals Produced
Thru 1/1/02	511,810	363,070	90,710	119,525	1,085,115	121,923
1/1/02	41,530	29,450	7,360	9,680	88,020	9,890
1/3/02	42,330	29,450	7,360	9,680	88,820	9,880
1/4/02	41,540	29,460	7,360	9,680	88,040	9,892
1/5/02	24,920	17,680	5,120	5,820	53,540	6,016
1/7/02	41,530	29,450	8,760	9,680	89,420	10,047
1/8/02	41,530	29,450	8,860	9,680	89,520	10,058
1/11/02	41,530	29,450	7,360	9,680	88,020	9,890
1/12/02	20,765	15,505	3,880	4,840	44,990	5,055
1/13/02	42,340	31,000	7,760	9,880	90,980	10,222
1/15/02	41,530	29,840	7,360	9,680	88,410	9,934
1/24/02	15,590	9,480	2,860	3,510	31,440	3,533
MTD Total	395,135	280,215	72,040	91,810	841,200	94,517
YTD Total	906,945	643,285	164,750	211,335	1,926,315	216,440
	3000	40400	40500	40600		

HAD TO ADD LAST
MTN TO INVENTORY
REVERSED SALE - TO RICECO

reported 22,168gals
produced using griffin tech/inv @ \$4.70 per gal
84,082gal produced
using cedar tech/inv @ \$8.58 per gal through 12/31/01

all of griffin tech has
been shown used

121,923

4# Packaging

Date	Lot#	4# Bulk Used	42230 Mt 35's Used	4# 35's Produced
Thru 1/1/02		106,225	3,035	3,035
Actual		86,250	2,750	2,750
1/3/02	PR401203-01	7,700	220	220
1/4/02	PR401204-01	10,850	310	310
1/7/02	PR401207-01	7,700	220	220
1/8/02	PR401208-01	11,375	325	325
1/9/02	PR401209-01	11,375	325	325
1/10/02	PR401210-01	7,175	205	205
1/11/02	PR401211-01	9,625	275	275
1/14/02	PR401214-01	10,675	305	305
1/15/02	PR401215-01	6,650	190	190
1/16/02	PR401216-01	10,500	300	300
1/21/02	PR401221-01	10,150	290	290
1/22/02	PR401222-01	9,975	285	285
1/25/02	PR401225-01	6,440	184	184
MTD Total		120,190	3,434	3,434

invoiced Griffin for 3035drs in dec.

issued credit to griffin and reinvolved RiceCo in Jan

invoiced riceco jan, 16

invoiced riceco jan, 18

Total prod and shipped

amount remaining to inv

invoiced riceco for remaining amnt
jan, 28

3035 drs/106,225gals

2355 drs/82,425gals

5390

6184

794

794 drs/27,790gals

0

YTD Total	216,440	6,184	6,184				
		42230					
Raw Materials Received							
Date	R/R #	Shipper	Container#	Propanil Tech	40600 4# Emulsifier	40500 Isophorone	MO
Thru 12/1/01				176,368			
Thru 1/1/02				94,798	89,940	129,120	375,863
1/2/02	19857	Celanese	GATX82089				184,459
1/2/02	19813	Stepan	3018		44960		
1/2/02	19815	Cone Solvents	1003			42,340	
1/4/02	19832	Stepan	2530		20060		
1/10/02	19842	Celanese	503698				44,200
1/10/02	19846	Celanese	1788				43,860
MTD Total				0	65,020	42,340	272,519
YTD Total				271,166	154,960	171,460	648,382
					40600	40500	

Packaging Materials Received

Date	RR#	Shipper	Carrier	Cont #	42230 Mt Blue 35's
Thru 1/1/02					4,318
1/2/02	19814	Greif Brothers	Trans Carriers	6231	480
1/2/02	19831	Greif Brothers	Trans Carriers	4391	480
1/2/02	19816	Greif Brothers	Trans Carriers	4388	480

MTD Total	1,440
YTD Total	5,758

Shipments

Date	B/L#	Ship To	Shipper	Container#	Lot#	Qty Shipped
Thur 1/1/02						2,750
1/3/02	R-01230	Blackhawk/Griffin	Blackhawk	1815	PR401203-01	110
1/4/02	R-01231	Blackhawk/Griffin	Blackhawk	7024	PR401203-01	110
1/4/02	R-01232	Blackhawk/Griffin	Blackhawk	1816	PR401204-01	110
1/4/02	R-01233	Blackhawk/Griffin	Blackhawk	7310	PR401204-01	110
1/7/02	R-01234	Blackhawk/Griffin	Blackhawk	7299	PR401205-01	90
"	"	"	"	"	PR401207-01	20
1/7/02	R-01235	Blackhawk/Griffin	Blackhawk	7310	PR401207-01	110
1/8/02	R-01236	Blackhawk/Griffin	Blackhawk	1816	PR401208-01	15
"	"	"	"	"	PR401207-01	95
1/8/02	R-01237	Blackhawk/Griffin	Blackhawk	7299	PR401208-01	110
1/8/02	R-01238	Blackhawk/Griffin	Blackhawk	1816	PR401208-01	110
1/9/02	R-01239	Blackhawk/Griffin	Blackhawk	1815	PR401209-01	25

"	"	"	"	"	PR401208-01	85
1/9/02	R-01240	Blackhawk/Griffin	Blackhawk	1816	PR401209-01	110
1/9/02	R-01241	Blackhawk/Griffin	Blackhawk	7299	PR401209-01	110
1/10/02	R-01242	Blackhawk/Griffin	Blackhawk	7031	PR401209-01	80
"	"	"	"	"	PR401210-01	30
1/10/02	R-01243	Blackhawk/Griffin	Blackhawk	1816	PR401210-01	110
1/11/02	R-01244	Blackhawk/Griffin	Blackhawk	1815	PR401210-01	65
"	"	"	"	"	PR401211-01	45
1/11/02	R-01245	Blackhawk/Griffin	Blackhawk	1816	PR401211-01	110
1/11/02	R-01246	Blackhawk/Griffin	Blackhawk	7299	PR401211-01	110
1/14/02	R-01247	Blackhawk/Griffin	Blackhawk	1816	PR401214-01	100
"	"	"	"	"	PR401211-01	10
1/14/02	R-01218	Blackhawk/Griffin	Blackhawk	1815	PR401214-01	110
1/15/02	R-01252	Blackhawk/Griffin	Blackhawk	7299	PR401215-01	15
"	"	"	"	"	PR401214-01	95
1/15/02	R-01253	Blackhawk/Griffin	Blackhawk	1816	PR401215-01	110
1/16/02	R-01254	Blackhawk/RiceC	Blackhawk	7021	PR401215-01	65
"	"	"	"	"	PR401216-01	45
1/16/02	R-01255	Blackhawk/RiceC	Blackhawk	1815	PR401216-01	110
1/16/02	R-01256	Blackhawk/RiceC	Blackhawk	7310	PR401216-01	110
1/21/02	R-01257	Blackhawk/RiceC	Blackhawk	7299	PR401216-01	35
"	"	"	"	"	PR401221-01	75
1/21/02	R-01258	Blackhawk/RiceC	Blackhawk	1815	PR401221-01	110
1/22/02	R-01259	Blackhawk/RiceC	Blackhawk	7310	PR401221-01	105
"	"	"	"	"	PR401222-01	5
1/22/02	R-01260	Blackhawk/RiceC	Blackhawk	1815	PR401222-01	110
1/22/02	R-01261	Blackhawk/RiceC	Blackhawk	1816	PR401222-01	110
1/25/02	R-01262	Blackhawk/RiceC	Blackhawk	1815	PR401222-01	60
"	"	"	"	"	PR401225-01	50
1/25/02	R-01273	Blackhawk/RiceC	Blackhawk	1816	PR401225-01	134

		Gals
MTD Total Shipped	3,434	120,190
YTD Total Shipped	6,184	216,440
Total Packaged for month	3,434	120,190
Amnt Remaining	0	

13th OF JAN

Invoiced riceco for
 106225gals in dec(3035drs)
 82,425gals in jan(2355drs)

Propanil Transfers In

From: 1/2 To 2/1

Date	RR#	Shipper	Carrier	Cont#	Item #	Product	Qty
1/8/2002	19837	Blackhawk	Blackhawk	7031	3050	Propanil Tech	39,000
1/15/2002	19877	Blackhawk	Blackhawk	7021	3050	Propanil Tech	39,000
1/21/2002	19907	Blackhawk	Blackhawk	8542	3050	Propanil Tech	39,000
1/25/2002	19927	Blackhawk	Blackhawk	8541	3050	Propanil Tech	39,000
Total by item:							156,000 ✓
1/2/2002	19820	Platte Chemical	Trans Carriers	6246	3500	Ro-Neet 2x2.5	16
Total by item:							16 ✓
1/2/2002	19820	Platte Chemical	Trans Carriers	6246	3520	Cycloate Tech 200kg	1
1/10/2002	19844	Gilscot	Horizon	CPSU108327-6	3520	Cycloate Tech 200kg	76
1/11/2002	19849	Gilscot	Horizon	IVLU953997-7	3520	Cycloate Tech 200kg	76
1/12/2002	19850	Gilscot	Horizon	FMGU205237-2	3520	Cycloate Tech 200kg	76
1/14/2002	19869	Gilscot	Horizon	TRIU37466-1	3520	Cycloate Tech 200kg	76
1/28/2002	19940	Blackhawk	Blackhawk	1815	3520	Cycloate Tech 200kg	77
1/28/2002	19939	Blackhawk	Blackhawk	1816	3520	Cycloate Tech 200kg	80
Total by item:							462 ✓
1/2/2002	19820	Platte Chemical	Trans Carriers	6246	41780	Sponto 221 ER	350
Total by item:							350 ✓
1/2/2002	19820	Platte Chemical	Trans Carriers	6246	46270	Kerosene	2,130
Total by item:							2,130 ✓

Tuesday, February 05, 2002

Propanil Shipments **From 1/1** **To 1/31**

<i>Date</i>	<i>B/L</i>	<i>Ship To</i>	<i>Shipper</i>	<i>Container</i>	<i>Item No</i>	<i>Name</i>	<i>Lot No</i>	<i>Qty</i>	<i>Misc</i>
1/25/2002	4-22283	Frontier Moving & Stora	Trans Carriers	6153	3500	Ro-Neet 2x2.5		720	Order#50136 rel# 1
1/28/2002	4-22290	Frontier Moving & Stora	Trans Carriers	6156	3500	Ro-Neet 2x2.5		720	Order#50136 rel#2
						Total by Ship To:		1,440	✓
1/31/2002	4-22292	Blackhawk	Blackhawk	7021	3500	Ro-Neet 2x2.5		324	Order#50134
						Total by Ship To:		324	✓
						Total by Item:		1,764	
1/21/2002	4-22284	West Central/Cedar Ch	Superior	1025	3490	Ro-Neet Bulk Gals R001221-02		4,964	Order#50138
						Total by Ship To:		4,964	✓
						Total by Item:		4,964	

<i>Date</i>	<i>B/L</i>	<i>Ship To</i>	<i>Shipper</i>	<i>Container</i>	<i>Item No</i>	<i>Name</i>	<i>Lot No</i>	<i>Qty</i>	<i>Misc</i>
1/3/2002	R-01230	Blackhawk/RiceCo	Blackhawk	1815	3340	4# 35's	PR401203-01	110	
1/4/2002	R-01231	Blackhawk/RiceCo	Blackhawk	7024	3340	4# 35's	PR401203-01	110	
1/4/2002	R-01232	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401204-01	110	
1/4/2002	R-01233	Blackhawk/RiceCo	Blackhawk	7310	3340	4# 35's	PR401204-01	110	
1/7/2002	R-01234	Blackhawk/RiceCo	Blackhawk	7299	3340	4# 35's	PR401207-01	20	
1/7/2002	R-01234	Blackhawk/RiceCo	Blackhawk	7299	3340	4# 35's	PR401205-01	90	
1/7/2002	R-01235	Blackhawk/RiceCo	Blackhawk	7310	3340	4# 35's	PR401207-01	110	
1/8/2002	R-01236	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401208-01	15	
1/8/2002	R-01236	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401207-01	95	
1/8/2002	R-01237	Blackhawk/RiceCo	Blackhawk	7299	3340	4# 35's	PR401208-01	110	
1/8/2002	R-01238	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401208-01	110	
1/9/2002	R-01239	Blackhawk/RiceCo	Blackhawk	1815	3340	4# 35's	PR401208-01	85	
1/9/2002	R-01239	Blackhawk/RiceCo	Blackhawk	1815	3340	4# 35's	PR401209-01	25	
1/9/2002	R-01240	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401209-01	110	
1/9/2002	R-01241	Blackhawk/RiceCo	Blackhawk	7299	3340	4# 35's	PR401209-01	110	
1/10/2002	R-01242	Blackhawk/RiceCo	Blackhawk	7031	3340	4# 35's	PR401210-01	30	
1/10/2002	R-01242	Blackhawk/RiceCo	Blackhawk	7031	3340	4# 35's	PR401209-01	80	
1/10/2002	R-01243	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401210-01	110	
1/11/2002	R-01244	Blackhawk/RiceCo	Blackhawk	1815	3340	4# 35's	PR401210-01	65	
1/11/2002	R-01244	Blackhawk/RiceCo	Blackhawk	1815	3340	4# 35's	PR401211-01	45	
1/11/2002	R-01245	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401211-01	110	
1/11/2002	R-01246	Blackhawk/RiceCo	Blackhawk	7299	3340	4# 35's	PR401211-01	110	
1/14/2002	R-01247	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401211-01	10	
1/14/2002	R-01247	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401214-01	100	
1/14/2002	R-01248	Blackhawk/RiceCo	Blackhawk	1815	3340	4# 35's	PR401214-01	110	
1/15/2002	R-01252	Blackhawk/RiceCo	Blackhawk	7299	3340	4# 35's	PR401214-01	95	
1/15/2002	R-01252	Blackhawk/RiceCo	Blackhawk	7299	3340	4# 35's	PR401215-01	15	

<i>Date</i>	<i>B/L</i>	<i>Ship To</i>	<i>Shipper</i>	<i>Container</i>	<i>Item No</i>	<i>Name</i>	<i>Lot No</i>	<i>Qty</i>	<i>Misc</i>
1/15/2002	R-01253	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401215-01	110	
1/16/2002	R-01254	Blackhawk/RiceCo	Blackhawk	7021	3340	4# 35's	PR401215-01	65	
1/16/2002	R-01254	Blackhawk/RiceCo	Blackhawk	7021	3340	4# 35's	PR401216-01	45	
1/16/2002	R-01255	Blackhawk/RiceCo	Blackhawk	1815	3340	4# 35's	PR401216-01	110	
1/16/2002	R-01256	Blackhawk/RiceCo	Blackhawk	7310	3340	4# 35's	PR401216-01	110	
1/21/2002	R-01257	Blackhawk/RiceCo	Blackhawk	7299	3340	4# 35's	PR401216-02	35	
1/21/2002	R-01257	Blackhawk/RiceCo	Blackhawk	7299	3340	4# 35's	PR401221-01	75	
1/21/2002	R-01258	Blackhawk/RiceCo	Blackhawk	1815	3340	4# 35's	PR401221-01	110	
1/22/2002	R-01259	Blackhawk/RiceCo	Blackhawk	7310	3340	4# 35's	PR401221-01	105	
1/22/2002	R-01259	Blackhawk/RiceCo	Blackhawk	7310	3340	4# 35's	PR401222-01	5	
1/22/2002	R-01260	Blackhawk/RiceCo	Blackhawk	1815	3340	4# 35's	PR401222-01	110	
1/22/2002	R-01261	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401222-01	110	
1/25/2002	R-01262	Blackhawk/RiceCo	Blackhawk	1815	3340	4# 35's	PR401225-01	50	
1/25/2002	R-01262	Blackhawk/RiceCo	Blackhawk	1815	3340	4# 35's	PR401222-01	60	
1/25/2002	R-01273	Blackhawk/RiceCo	Blackhawk	1816	3340	4# 35's	PR401225-01	134	

Total by Ship To: 3,434

Total by Item: 3,434

1/18/2002 R-01263 Fedderson/Gilscot Horizon TTNU553052-6 3060

Flake Tech 25kg 760

Total by Ship To: 760

1/31/2002 4-22327 Blackhawk/RiceCo Blackhawk 8541 3060

Flake Tech 25kg 760 Order#50187 rel#1

1/31/2002 4-22328 Blackhawk/RiceCo Blackhawk 7031 3060

Flake Tech 25kg 760 Order#50187 rel#2

1/31/2002 4-22329 Blackhawk/RiceCo Blackhawk 3060

Flake Tech 25kg 760 Order#50187 rel#3

Total by Ship To: 2,280

Total by Item: 3,040

<i>Date</i>	<i>R/L</i>	<i>Ship To</i>	<i>Shipper</i>	<i>Container</i>	<i>Item No</i>	<i>Name</i>	<i>Lot No</i>	<i>Qty</i>	<i>Misc</i>
1/14/2002	4-22218	Odom/Pachuta	Trans Carriers	4322	3050	Flake Tech	FL01210-01	39,000	Order#50107 rel#1
1/14/2002	4-22219	Odom/Pachuta	Trans Carriers	6246	3050	Flake Tech	FL01217-01	39,000	Order#50107 rel#2
1/16/2002	4-22220	Odom/Pachuta	Trans Carriers	6229	3050	Flake Tech	FL01215-01	7,500	Order#50107 rel#3
1/16/2002	4-22220	Odom/Pachuta	Trans Carriers	6229	3050	Flake Tech	FL01214-01	31,500	Order#50107 rel#3
1/17/2002	4-22221	Odom/Pachuta	Trans Carriers	4391	3050	Flake Tech	FL01216-01	30,000	Order#50107 rel#4
1/17/2002	4-22221	Odom/Pachuta	Trans Carriers	4391	3050	Flake Tech	FL01216-02	9,000	Order#50107 rel#4
1/21/2002	4-22222	Odom/Pachuta	Trans Carriers	4325	3050	Flake Tech		39,000	Order# 50107 rel#5
1/21/2002	4-22223	Odom/Pachuta	Trans Carriers	6176	3050	Flake Tech		39,000	Order#50107 rel#6
1/21/2002	4-22224	Odom/Pachuta	Trans Carriers	6274	3050	Flake Tech		39,000	Order#50107 rel#7
1/22/2002	4-22289	Odom/Pachuta	Trans Carriers	6125	3050	Flake Tech	FL01221-01	30,000	Order# 50146
1/22/2002	4-22289	Odom/Pachuta	Trans Carriers	6125	3050	Flake Tech	FI01220-01	9,000	Order# 50146

Total by Ship To:

312,000 ✓

<i>Date</i>	<i>B/L</i>	<i>Ship To</i>	<i>Shipper</i>	<i>Container</i>	<i>Item No</i>	<i>Name</i>	<i>Lot No</i>	<i>Qty</i>	<i>Misc</i>
1/24/2002	4-22055	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01222-01	28,500	Order# 49894 ref#3
1/24/2002	4-22055	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01222-01	7,500	Order# 49894 ref#3
1/24/2002	4-22056	Blackhawk	Blackhawk	7021	3050	Flake Tech	FL01223-01	25,500	Order#49894 ref#4
1/24/2002	4-22056	Blackhawk	Blackhawk	7021	3050	Flake Tech	FL01222-02	13,500	Order#49894 ref#4
1/25/2002	4-22057	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01222-01	34,500	Order#49894 ref#5
1/25/2002	4-22057	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01221-01	1,500	Order#49894 ref#5
1/25/2002	4-22058	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01224-01	21,000	Order#49894 ref#6
1/25/2002	4-22058	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01225-01	3,000	Order#49894 ref#6
1/25/2002	4-22058	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01223-01	15,000	Order#49894 ref#6
1/28/2002	4-22059	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01227-01	22,500	Order#49894 ref#7
1/28/2002	4-22059	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01226-01	16,500	Order#49894 ref#7
1/28/2002	4-22060	Blackhawk	Blackhawk	7021	3050	Flake Tech	FL01225-01	36,000	Order#49894 ref#8
1/28/2002	4-22060	Blackhawk	Blackhawk	7021	3050	Flake Tech	FL01225-02	3,000	Order#49894 ref#8
1/28/2002	4-22061	Blackhawk	Blackhawk	7031	3050	Flake Tech	FL01226-01	6,000	Order#49894 ref#9
1/28/2002	4-22081	Blackhawk	Blackhawk	7031	3050	Flake Tech	FL01226-02	28,500	Order#49894 ref#9
1/28/2002	4-22061	Blackhawk	Blackhawk	7031	3050	Flake Tech	FL01227-01	1,500	Order#49894 ref#9
1/29/2002	4-22062	Blackhawk	Blackhawk	7021	3050	Flake Tech	FL01221-01	3,000	Order#49894 ref#11
1/29/2002	4-22062	Blackhawk	Blackhawk	7021	3050	Flake Tech	FL01227-01	15,000	Order#49894 ref#11
1/29/2002	4-22083	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01227-01	25,500	Order#49894 ref#10
1/29/2002	4-22063	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01228-01	10,500	Order#49894 ref#10
1/31/2002	4-22311	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01229-01	10,500	Order#49894 ref#12
1/31/2002	4-22311	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01230-01	24,000	Order#49894 ref#12
1/31/2002	4-22311	Blackhawk	Blackhawk	8542	3050	Flake Tech	FL01230-02	4,500	Order#49894 ref#12

Total by Ship To:

357,000 ✓

Total by Item:

669,000

Monday, February 04, 2002

Raw Materials Received for the Period From 1/1 To 1/31

Date	RR	Shipper/Vendor	Carrier	Container	Item No	Name	Qty
1/8/2002	19835	Adjuvants	Priority	53545	48350	AU-54 Emulsifier(Ro-Neet)	14,100
Sub Total by Shipper:							14,100
Sub Total by Item:							14,100
1/11/2002	19860	Cunningham	Cunningham		48270	Kerosene	16,549
1/14/2002	19870	Cunningham	Cunningham		48270	Kerosene	16,415
1/24/2002	19918	Cunningham	Cunningham		48270	Kerosene	16,381
1/25/2002	19928	Cunningham	Cunningham		48270	Kerosene	16,201
Sub Total by Shipper:							65,526
Sub Total by Item:							65,526
1/4/2002	19115	Grief Brothers	Trans Carriers		42230	mt Drums-35 gal Plastic	480
Sub Total by Shipper:							480
1/2/2002	19814	Greif Brothers	Trans Carriers	6231	42230	mt Drums-35 gal Plastic	480
1/2/2002	19816	Greif Brothers	Trans Carriers	4388	42230	mt Drums-35 gal Plastic	480
1/4/2002	19831	Greif Brothers	Trans Carriers	4391	42230	mt Drums-35 gal Plastic	480
Sub Total by Shipper:							1,440
Sub Total by Item:							1,920
1/2/2002	19813	Stepan	Groendyke	3018	40600	Emulsifier	44,960
1/4/2002	19832	Stepan	Groendyke	2530	40600	Emulsifier	20,060
Sub Total by Shipper:							65,020
Sub Total by Item:							65,020
1/2/2002	19815	Cone Solvents	Coen Solvents	1003	40500	Isophorone	42,340
Sub Total by Shipper:							42,340
Sub Total by Item:							42,340
1/2/2002	19857	Celanese	Groendyke	GATX82089	40400	MO	184,459
1/10/2002	19846	Celanese	Groendyke	1788	40400	MO	43,860
1/10/2002	19842	Celanese	Groendyke	503698	40400	MO	44,200

<i>Date</i>	<i>RR</i>	<i>Shipper/Vendor</i>	<i>Carrier</i>	<i>Container</i>	<i>Item No</i>	<i>Name</i>	<i>Qty</i>
Sub Total by Shipper:							272,519
Sub Total by Item:							272,519
1/1/2002	19809	Celanese	Groendyke	2418	40200	Propionic Acid	44,940
1/4/2002	19829	Celanese	Groendyke	3006	40200	Propionic Acid	44,800
1/7/2002	19834	Celanese	Groendyke	2268	40200	Propionic Acid	44,800
1/10/2002	19843	Celanese	Groendyke	2024	40200	Propionic Acid	44,840
1/13/2002	19865	Celanese	Groendyke	3824	40200	Propionic Acid	44,800
1/15/2002	19876	Celanese	Groendyke	3588	40200	Propionic Acid	44,740
1/16/2002	19885	Celanese	Groendyke	1948	40200	Propionic Acid	44,820
1/19/2002	19894	Celanese	Groendyke	3446	40200	Propionic Acid	45,120
1/20/2002	19902	Celanese	Groendyke	2244	40200	Propionic Acid	44,980
1/21/2002	19904	Celanese	Groendyke	3750	40200	Propionic Acid	44,820
1/23/2002	19913	Celanese	Groendyke	3006	40200	Propionic Acid	44,940
1/24/2002	19922	Celanese	Groendyke	3588	40200	Propionic Acid	45,000
1/27/2002	19932	Celanese	Groendyke	3742	40200	Propionic Acid	44,820
1/29/2002	19942	Celanese	Groendyke	3486	40200	Propionic Acid	44,920
Sub Total by Shipper:							628,540
Sub Total by Item:							628,540

#46030 Propionic Acid returned from Dupocsa 3/21/01 -120drums@ 223kgs
ea.=26,760kgs, #46040 DCA 58drs@246kgs ea.=14,268kgs

Received kerosene in @Cedar from Cone Solvents for Cycloate-transferred to r/c#
ACFX87825 to ship to Platte Chemical.(10,240lbs)

#46090 MO transferred in from Dupocsa 9/17/01-66drums@168.5kgs ea=11,123kgs -
#46100 Toluene transferred in-14drs@161kgs ea.=2,257kgs

Monday, February 04, 2002

DCA 1st Step Nitrations By Batch By Period From 1/2 To 2/1

<i>Start</i>	<i>Bx</i>	<i>41000 ODCB</i>	<i>41020 Nitric Acid</i>	<i>41010 Sulfuric Acid</i>	<i>41050 Soda Ash</i>	<i>DCNB Produced</i>
12/31/2001	DA121363	0	0	0	7	21,647
12/31/2001	DA121364	16,271	0	0	7	21,043
1/1/2002	DA012001	16,280	7,003	13,223	7	21,418
1/1/2002	DA012002	16,233	7,054	13,162	7	21,114
1/2/2002	DA012003	16,272	7,115	13,161	8	21,444
1/2/2002	DA012004	16,272	7,012	13,199	7	21,378
1/6/2002	DA012005	16,268	7,109	13,181	7	21,221
1/7/2002	DA012006	16,287	7,074	13,211	7	21,504
1/7/2002	DA012007	16,251	7,039	13,179	7	20,879
1/8/2002	DA012008	16,189	7,031	13,220	7	22,147
1/8/2002	DA012009	16,278	7,053	13,227	7	21,298
1/8/2002	DA012010	16,201	7,028	13,200	8	21,308
1/9/2002	DA012011	16,275	7,027	13,200	8	21,482
1/9/2002	DA012012	16,262	7,050	13,199	0	21,263
1/9/2002	DA012013	16,273	7,095	13,197	8	20,948
1/10/2002	DA012014	16,242	7,018	13,252	8	21,421
1/10/2002	DA012015	16,252	7,039	13,223	8	20,998
1/10/2002	DA012016	16,248	7,103	13,157	8	20,782
1/11/2002	DA012017	16,238	7,081	13,211	8	22,628
1/11/2002	DA012018	16,238	7,062	13,222	8	21,200
1/11/2002	DA012019	16,200	7,000	13,220	8	22,134
1/12/2002	DA012020	19,154	7,041	13,201	8	21,120
1/12/2002	DA012021	16,120	7,078	13,210	8	20,980
1/12/2002	DA012022	16,159	7,035	13,225	8	20,973
1/13/2002	DA012023	16,167	7,148	13,188	0	21,678
1/13/2002	DA012024	16,139	7,146	13,127	8	21,434
1/13/2002	DA012025	16,190	7,020	13,214	6	21,257
1/14/2002	DA012026	16,151	7,089	13,161	6	20,480
1/14/2002	DA012027	16,133	7,123	13,131	6	21,100
1/14/2002	DA012028	16,138	6,950	13,270	6	21,156

<i>Start</i>	<i>Bx</i>	<i>41000 ODCB</i>	<i>41020 Nitric Acid</i>	<i>41010 Sulfuric Acid</i>	<i>41050 Soda Ash</i>	<i>DCNB Produced</i>
1/15/2002	DA012029	16,239	7,073	13,148	8	21,065
1/15/2002	DA012030	16,288	7,102	13,163	8	21,100
1/15/2002	DA012031	16,270	7,047	13,208	8	20,286
1/16/2002	DA012032	16,302	7,167	13,210	8	20,760
1/16/2002	DA012033	16,265	7,085	13,190	8	21,540
1/16/2002	DA012034	16,254	7,062	13,227	6	20,980
1/17/2002	DA012035	16,276	7,065	13,164	6	21,436
1/18/2002	DA012036	16,245	7,032	13,218	8	21,523
1/19/2002	DA012037	16,263	7,074	13,187	8	21,377
1/19/2002	DA012038	16,237	7,067	13,179	8	21,214
1/19/2002	DA012039	16,210	7,082	13,163	8	20,987
1/20/2002	DA012040	16,253	7,079	13,163	8	20,975
1/20/2002	DA012041	16,235	7,051	13,190	8	20,180
1/20/2002	DA012042	16,234	7,020	13,175	8	21,057
1/21/2002	DA012043	16,236	7,103	13,179	0	21,267
1/22/2002	DA012044	16,234	7,062	13,292	8	21,697
1/22/2002	DA012045	16,277	7,122	13,123	8	20,878
1/22/2002	DA012046	19,283	7,041	13,215	6	21,597
1/22/2002	DA012047	16,280	7,090	13,200	6	21,214
1/23/2002	DA012048	16,270	7,133	13,187	6	21,331
1/23/2002	DA012049	16,260	7,099	13,197	6	21,279
1/24/2002	DA012050	16,227	7,102	13,149	6	21,392
1/24/2002	DA012051	16,186	6,982	13,197	6	21,416
1/24/2002	DA012052	16,285	7,028	13,182	6	21,241
1/25/2002	DA012053	16,280	7,106	13,155	8	20,864
1/26/2002	DA012054	16,251	7,044	13,163	6	20,410
1/26/2002	DA012055	16,269	7,091	13,196	6	21,382
1/26/2002	DA012056	16,255	7,055	13,176	8	20,874
1/27/2002	DA012057	16,208	7,018	13,212	8	20,263
1/27/2002	DA012058	16,247	7,082	13,201	8	21,047
1/27/2002	DA012059	16,263	7,058	13,196	8	20,860
1/28/2002	DA012060	16,259	7,084	13,202	8	19,130
1/29/2002	DA012061	16,245	7,100	13,205	8	20,874

<i>Start</i>	<i>Bx</i>	<i>41000 ODCB</i>	<i>41020 Nitric Acid</i>	<i>41010 Sulfuric Acid</i>	<i>41050 Soda Ash</i>	<i>DCNB Produced</i>
1/29/2002	DA012062	16,236	7,101	13,203	6	21,069
1/29/2002	DA012063	16,259	7,139	13,164	6	21,502
1/30/2002	DA012064	16,278	7,082	13,216	6	21,216
1/30/2002	DA012065	16,284	7,143	13,179	7	21,348
1/30/2002	DA012066	16,269	7,104	13,202	7	21,292
1/31/2002	DA012067	16,279	7,178	13,183	7	21,248
1/31/2002	DA012068	0	7,053	13,231	0	0
Report total		1,110,368	480,839	897,161	475	1,460,606

Monday, February 04, 2002

DCA 2nd Step Hydrogenations By Batch By Period From 1/2 To 2/1

<i>Start</i>	<i>Bx</i>	<i>DCNB Used</i>	<i>41070 Platinum Catalyst</i>	<i>41030 Hydrogen</i>	<i>45090 50% R Caustic</i>	<i>Crude DCA Produced</i>
1/1/2002	DB012001A	10,085	1.7	279	88	8,474
1/1/2002	DB012002A	10,085	1.7	276	88	8,474
1/1/2002	DB012003A	10,085	1.7	272	88	8,474
1/1/2002	DB012004A	10,085	1.7	270	88	8,474
1/1/2002	DB012005A	10,085	1.7	262	88	8,474
1/1/2002	DB121233A	10,085	1.7	273	88	8,474
1/2/2002	DB012006A	10,085	1.7	274	88	8,474
1/2/2002	DB012007A	10,085	1.7	268	88	8,474
1/2/2002	DB012008A	10,085	1.7	265	88	8,474
1/6/2002	DB012001B	9,477	1.7	271	80	7,964
1/6/2002	DB012009A	10,085	1.7	139	88	8,474
1/6/2002	DB012010A	10,085	1.7	137	88	8,474
1/6/2002	DB012011A	10,085	1.7	133	88	8,474
1/6/2002	DB012012A	10,085	1.7	141	88	8,474
1/6/2002	DB012013A	10,085	1.7	132	88	8,474
1/7/2002	DB012002B	9,477	1.7	255	80	7,964
1/7/2002	DB012014A	10,085	1.7	202	80	8,474
1/7/2002	DB012015A	10,085	1.7	277	80	8,474
1/8/2002	DB012003B	9,477	1.7	261	80	7,467
1/8/2002	DB012004B	9,477	1.7	259	70	7,467
1/8/2002	DB012005B	9,477	1.7	259	83	7,658
1/8/2002	DB012016A	10,085	1.7	276	83	8,474
1/8/2002	DB012017A	10,085	1.7	277	80	8,474
1/8/2002	DB012018A	10,085	1.7	277	70	8,474
1/8/2002	DB012019A	10,085	1.7	275	70	8,474
1/8/2002	DB012020A	10,085	1.7	281	83	8,474
1/9/2002	DB012006B	9,477	1.7	262	83	7,658

<i>Start</i>	<i>Bx</i>	<i>DCNB Used</i>	<i>41070 Platinum Catalysyst</i>	<i>41030 Hydrogen</i>	<i>45090 50% R Caustic</i>	<i>Crude DCA Produced</i>
1/9/2002	DB012007B	9,477	1.7	265	83	7,658
1/9/2002	DB012021A	10,085	1.7	277	83	8,474
1/9/2002	DB012022A	10,085	1.7	267	83	8,474
1/9/2002	DB012023A	10,085	1.7	284	83	8,474
1/10/2002	DB012008B	9,477	1.7	272	88	7,964
1/10/2002	DB012009B	9,477	1.7	266	88	7,964
1/10/2002	DB012010B	9,477	1.7	262	88	7,964
1/10/2002	DB012024A	10,085	1.7	295	88	8,474
1/10/2002	DB012025A	10,085	1.7	172	88	8,474
1/10/2002	DB012026A	10,085	1.7	276	88	8,474
1/10/2002	DB012027A	10,085	1.7	283	88	8,474
1/11/2002	DB012011B	9,477	1.7	265	88	7,864
1/11/2002	DB012012B	9,477	1.7	260	88	7,864
1/11/2002	DB012013B	9,477	1.7	270	88	7,864
1/11/2002	DB012028A	10,085	1.7	285	88	8,474
1/11/2002	DB012029A	10,085	1.7	286	88	8,474
1/11/2002	DB012030A	10,085	1.7	279	88	8,474
1/12/2002	DB012014B	9,477	1.7	259	78	7,964
1/12/2002	DB012015B	9,477	1.8	263	78	7,964
1/12/2002	DB012016B	9,477	1.7	256	78	7,964
1/12/2002	DB012031A	10,085	1.7	280	78	8,474
1/12/2002	DB012032A	10,085	1.7	260	78	8,474
1/12/2002	DB012033A	10,085	1.7	277	78	8,474
1/12/2002	DB012037A	10,085	1.7	278	78	8,474
1/13/2002	DB012017B	9,477	1.7	260	78	7,964
1/13/2002	DB012018B	9,477	1.7	263	78	7,964
1/13/2002	DB012019B	9,477	1.7	257	78	7,964
1/13/2002	DB012034A	10,085	1.7	272	78	8,474
1/13/2002	DB012035A	10,085	1.7	282	78	8,474
1/13/2002	DB012036A	10,085	1.7	283	78	8,474
1/13/2002	DB012038A	10,085	1.7	280	78	8,474

<i>Start</i>	<i>Bx</i>	<i>DCNB Used</i>	<i>41070 Platinum Catalyst</i>	<i>41030 Hydrogen</i>	<i>45090 50% R Caustic</i>	<i>Crude DCA Produced</i>
1/14/2002	DB012020B	9,477	1.7	264	84	7,964
1/14/2002	DB012021B	9,477	1.7	267	84	7,964
1/14/2002	DB012022B	9,477	1.7	258	84	7,964
1/14/2002	DB012023B	9,477	1.7	259	84	7,964
1/14/2002	DB012039A	10,085	1.7	287	84	8,474
1/14/2002	DB012040A	10,085	1.7	294	84	8,474
1/14/2002	DB012041A	10,085	1.7	282	84	8,474
1/14/2002	DB012042A	10,085	1.7	236	84	8,474
1/15/2002	DB012024B	9,477	1.7	272	84	7,964
1/15/2002	DB012025B	9,477	1.7	259	84	7,964
1/15/2002	DB012043A	10,085	1.7	295	84	8,474
1/15/2002	DB012044A	10,085	1.7	282	84	8,474
1/16/2002	DB012026B	9,477	1.7	260	84	7,964
1/16/2002	DB012027B	9,477	1.7	289	84	7,964
1/16/2002	DB012045A	10,085	1.7	288	84	8,474
1/16/2002	DB012048A	10,085	1.7	230	84	8,474
1/17/2002	DB012028B	9,477	1.7	258	84	7,964
1/17/2002	DB012047A	10,085	1.7	285	84	8,474
1/18/2002	DB012029B	9,477	1.7	261	80	7,964
1/18/2002	DB012030B	9,477	1.7	257	80	7,964
1/18/2002	DB012048A	10,085	1.7	281	80	8,474
1/18/2002	DB012049A	10,085	1.7	279	80	8,474
1/18/2002	DB012050A	10,085	1.7	272	80	8,474
1/19/2002	DB012031B	9,477	1.7	265	84	7,964
1/19/2002	DB012032B	9,477	1.7	257	89	7,964
1/19/2002	DB012033B	9,477	1.7	258	89	7,964
1/19/2002	DB012034B	9,477	1.7	261	88	7,964
1/19/2002	DB012051A	10,085	1.7	285	84	8,474
1/19/2002	DB012052A	10,085	1.7	281	89	8,474
1/19/2002	DB012053A	10,085	1.7	283	89	8,474
1/19/2002	DB012054A	10,085	1.7	280	88	8,474

<i>Start</i>	<i>Bx</i>	<i>DCNB Used</i>	<i>41070 Platinum Catalysyt</i>	<i>41030 Hydrogen</i>	<i>45090 50% R Caustic</i>	<i>Crude DCA Produced</i>
1/20/2002	DB012035B	9,477	1.7	262	88	7,964
1/20/2002	DB012036B	9,477	1.7	262	88	7,964
1/20/2002	DB012037B	9,477	1.7	261	88	7,964
1/20/2002	DB012055A	10,085	1.7	284	88	8,474
1/20/2002	DB012056A	10,085	1.7	285	88	8,474
1/20/2002	DB012057A	10,085	1.7	286	88	8,474
1/21/2002	DB012038B	9,477	1.7	264	96	7,487
1/21/2002	DB012039B	9,477	1.7	264	88	7,964
1/21/2002	DB012058A	10,085	1.7	287	96	8,474
1/21/2002	DB012059A	10,085	1.7	282	88	8,474
1/22/2002	DB012040B	9,477	1.7	265	88	7,964
1/22/2002	DB012041B	9,477	1.7	263	88	7,964
1/22/2002	DB012060A	10,085	1.7	284	88	8,474
1/22/2002	DB012061A	10,085	1.7	286	88	8,474
1/23/2002	DB012042B	9,477	1.7	270	84	7,964
1/23/2002	DB012043B	9,477	1.7	271	84	7,964
1/23/2002	DB012062A	10,085	1.7	292	88	8,474
1/23/2002	DB012063A	10,085	1.7	292	84	8,474
1/24/2002	DB012044B	9,477	1.7	263	95	7,964
1/24/2002	DB012045B	9,477	1.7	263	84	7,964
1/24/2002	DB012064A	10,085	1.7	290	95	8,474
1/24/2002	DB012065A	10,085	3.3	286	84	8,474
1/25/2002	DB012046B	9,477	1.7	267	84	7,964
1/25/2002	DB012047B	9,477	1.7	257	84	7,964
1/25/2002	DB012048B	9,477	1.7	257	84	7,964
1/25/2002	DB012049B	9,477	1.7	258	84	7,964
1/25/2002	DB012066A	10,085	1.7	289	84	8,474
1/25/2002	DB012067A	10,085	1.7	280	84	8,474
1/25/2002	DB012068A	10,085	1.7	280	84	8,474
1/25/2002	DB012069A	10,085	1.7	280	84	8,474
1/26/2002	DB012050B	9,477	1.7	263	84	7,964

<i>Start</i>	<i>Bx</i>	<i>DCNB Used</i>	<i>41070 Platinum Catalyst</i>	<i>41030 Hydrogen</i>	<i>45090 50% R Caustic</i>	<i>Crude DCA Produced</i>
1/26/2002	DB012051B	9,477	1.7	263	84	7,964
1/26/2002	DB012052B	9,477	1.7	273	84	7,964
1/26/2002	DB012070A	10,085	1.7	284	84	8,474
1/26/2002	DB012071A	10,085	1.7	285	84	8,474
1/26/2002	DB012072A	10,085	1.8	297	84	8,474
1/27/2002	DB012053B	9,477	1.7	278	95	7,964
1/27/2002	DB012073A	10,085	1.7	300	95	8,474
1/28/2002	DB012054B	9,477	1.7	261	95	7,964
1/28/2002	DB012074A	10,085	1.7	286	95	8,474
1/29/2002	DB012055B	9,477	1.7	262	80	7,964
1/29/2002	DB012056B	9,477	1.7	266	74	7,964
1/29/2002	DB012057B	9,477	1.7	271	74	7,964
1/29/2002	DB012058B	9,477	1.7	280	74	7,964
1/29/2002	DB012075A	10,085	1.7	288	80	8,474
1/29/2002	DB012076A	10,085	1.7	276	74	8,474
1/29/2002	DB012077A	10,085	1.7	293	74	8,474
1/29/2002	DB012078A	10,085	1.7	295	74	8,474
1/30/2002	DB012059B	9,447	1.7	270	84	7,964
1/30/2002	DB012060B	9,477	1.7	269	84	7,964
1/30/2002	DB012061B	9,477	1.7	266	84	7,964
1/30/2002	DB012079A	10,085	1.7	292	84	8,474
1/30/2002	DB012080A	10,085	1.7	316	84	8,474
1/30/2002	DB012081A	10,085	1.7	290	84	8,474
1/31/2002	DB012062B	9,477	1.7	269	84	7,964
1/31/2002	DB012063B	9,477	1.7	264	84	7,964
1/31/2002	DB012082A	10,085	1.7	290	84	8,474
1/31/2002	DB012083A	10,085	1.7	290	84	8,474

<i>Start</i>	<i>Bx</i>	<i>DCNB Used</i>	<i>41070 Platinum Catalysyt</i>	<i>41030 Hydrogen</i>	<i>45090 50% R Caustic</i>	<i>Crude DCA Produced</i>
		1,444,161	252	39,337	12,380	1,210,859

Tuesday, February 05, 2002

DCA Drummed Material From 1/2 To: 2/1

<i>Date Entered</i>	<i>Date Started</i>	<i>Bx</i>	<i>3010 Pkg</i>	<i>3020</i>
2/1/2002	1/31/2002	reworked material	✓ -3	-1,650
			✓ -3	-1,650

DCA Bulk Kgs Prod

Monday, February 04, 2002

From 1/2 To: 2/1

<i>Date Entered</i>	<i>Date Started</i>	<i>3020 DCA Bulk Used</i>	<i>3870 DCA Bulk Kgs Prod</i>
1/28/2002	1/30/2002	38,540	17,482
1/25/2002	1/28/2002	39,360	17,854
		77,900	35,336

Tuesday, February 05, 2002

DCA Raw Materials Received For The Period From 1/1 To 1/31

Item No	Description	Shipper	Date	RR#	Carrier	R/C #	Qty	Misc
45090	50% Caustic	Brenntag	1/2/2002	19819	CTL		44,740	
			1/4/2002	19830	CTL		46,340	
			1/8/2002	19839	CTL		45,300	
			1/10/2002	19847	CTL		44,420	
			1/17/2002	19889	CTL		46,340	
			1/19/2002	19899	CTL		45,560	
			1/21/2002	19908	CTL		44,520	
			1/26/2002	19831	CTL		46,100	
			1/29/2002	19946	CTL		46,840	
					Total by Shipper:		410,160	✓
		Ideal	1/13/2002	19866	Quality Carriers		46,680	
					Total by Shipper:		46,680	✓
					Total by Item No:		456,840	
41030	Hydrogen	Praxair	1/1/2002	19812	Praxair		4,440	
			1/5/2002	19833	Praxair		1,060	
			1/9/2002	19841	Praxair		6,020	
			1/12/2002	19864	Praxair		6,840	
			1/15/2002	19874	Praxair		7,500	
			1/17/2002	19891	Praxair		3,820	
			1/19/2002	19900	Praxair		1,860	
			1/22/2002	19912	Praxair		7,120	

Item No	Description	Shipper	Date	RR#	Carrier	R/C #	Qty	Misc		
41060	Lime		1/23/2002	19915	Praxair		1,660			
			1/27/2002	19934	Praxair		7,460			
			1/31/2002	19954	Praxair		6,860			
							Total by Shipper:	54,640	✓	
							Total by Item No:	54,640	✓	
		Brenntag								
			1/15/2002	19879	Milan Express		30,000			
								Total by Shipper:	30,000	✓
							Total by Item No:	30,000	✓	
		41020	Nitric Acid	El Dorado	1/2/2002	19817	Miller		49,100	
					1/10/2002	19845	Miller		48,780	
1/13/2002	19867				Miller		48,120			
1/14/2002	19872			Miller		49,660				
1/15/2002	19880			Miller		22,840	26,460lbs unloaded @unit 4			
1/16/2002	19884			Miller		49,600				
1/18/2002	19898			Miller		18,800				
1/21/2002	19906			Miller		49,420				
1/25/2002	19926			Miller		48,740				
1/27/2002	19933			Miller		49,080				
1/29/2002	19945			Miller		48,580				
					Total by Shipper:	482,720	✓			
					Total by Item No:	482,720	✓			
41000	ODCB			Metachem	1/8/2002	19818	AKMD	NATX72895	185,140	

Item No	Description	Shipper	Date	RR#	Carrier	R/C #	Qty	Misc			
41070	Platinum Carbon Catalyst	Johnson Matthey	1/12/2002	18080	Midland	PLCX221742	184,700				
			1/15/2002	19061	Midland	UTLX640741	185,400				
			1/21/2002	19086	Midland	GATX1841	184,810				
			1/21/2002	19063	Midland	GATX34270	185,370				
			1/24/2002	19065	AKMD	UTLX860949	175,800				
			1/25/2002	19064	AKMD	TIMX2610	184,400				
							Total by Shipper:	1,285,620	✓		
							Total by Item No:	1,285,620			
			1/28/2002	19938	Roadway		331				
							Total by Shipper:	331	✓		
							Total by Item No:	331			
			41010	Sulfuric Acid	El Dorado	1/1/2002	19811	Miller		49,140	
						1/4/2002	19826	Miller		45,560	
1/10/2002	19848	Miller					48,960				
1/11/2002	19861	Miller					49,060				
1/14/2002	19868	Miller					48,500				
1/14/2002	19875	Miller					48,860				
1/15/2002	19878	Miller					49,060				
1/16/2002	19881	Miller					27,080	21880lbs unloaded@unit4			
1/16/2002	19886	Miller					49,020				
1/17/2002	19893	Miller					49,560				
1/19/2002	19901	Miller					49,360				
1/20/2002	19903	Miller					49,340				
1/21/2002	19909	Miller					48,820				

<i>Item No</i>	<i>Description</i>	<i>Shipper</i>	<i>Date</i>	<i>RR#</i>	<i>Carrier</i>	<i>R/C #</i>	<i>Qty</i>	<i>Misc</i>
			1/24/2002	19921	Miller		48,420	
			1/25/2002	19929	Miller		49,680	
			1/27/2002	19935	Miller		49,240	
			1/28/2002	19941	Miller		49,160	
			1/31/2002	19955	Miller		49,180	

Total by Shipper:

858,000

Total by Item No:

858,000

4 Tapa

Ideal

1/29/2002 19943 Idca

1,844

Total by Shipper:

1,844

Total by Item No:

1,844

Monday, February 04, 2002

DCA Miscellaneous By Batch By Period From 1/2 To 2/1

<i>Entry</i>	<i>Ferrous Sulfate</i>	<i>TEPA</i>	<i>41630 Morph</i>	<i>41090 35 % Perox</i>
1/9/2002	12	0.00	0	500
1/10/2002	12	0.00	0	500
1/13/2002	12	0.00	0	500
1/22/2002	0	17.00	0	0
1/28/2002	0	12.00	0	0
1/31/2002	0	3.00	0	0
Report total	36	32	0	1,500

Monday, February 04, 2002

DCA Shipments By Period From 1/1 To 1/31

<i>Date</i>	<i>B/L</i>	<i>Ship To</i>	<i>Booking</i>	<i>Vessel</i>	<i>Container</i>	<i>Item No</i>	<i>Bx No</i>	<i>Qty</i>
1/25/2002	4-22308	North Hungaria	DHHB10829	Lykes Motivator	TOLU916057-3	3870		17,854
1/30/2002	4-22320	North Hungaria	DHHB10829	Lykes Motivator	TRLU027113-9	3870		17,482

Total by item: 35,336
Report Total: 35,336 ✓

Monday, February 04, 2002

Diuron Production by Period by Batch From: 1/2 To: 2/1

Started	Bx	DCPI Used	DMA Used	Heptane Used	Bags Prod	Diuron Std	Diuron B	B-Grade Used	Diuron Off Spec	Misc
12/31/2001	571275	0	0	0	5	5,000	0	0	0	
12/31/2001	571276	0	0	0	5	5,000	0	0	0	
1/1/2002	572001	3,900	1,040	0	5	5,000	0	0	0	
1/1/2002	572002	3,945	1,120	0	5	5,000	0	0	0	
1/2/2002	572003	3,825	1,075	0	5	5,000	0	0	0	
Report Totals:		11,670	3,235	0	25	25,000	0	0	0	
		40150	41650	41660		3030	3040			

Corrections for March and April production due to incorrect numbers being reported.

Total production for March and April should have been 220,200lbs. (321 Std.-Grade bags @ 600lbs ea.--46 B-Grade @ 600lbs. ea).

Made corrections in production October 8th on Std Grade-(-6,382lbs) - B-Grade- (+6,700lbs) to correct inventory.

Monday, February 04, 2002

Diuron Shipments for the Period From 1/1 To 1/31

Date	Item No	Product	Bill of Lading	Ship To	Shipper	Lot#	Qty	Misc
1/18/2002	3030	Diuron Std Grad	4-22241	Biesterfeld/Platte C	Trans Carriers	see file for lot#	28,000	50116
				Sub Total By Ship to			28,000	
1/21/2002	3030	Diuron Std Grad	4-22242	Biesterfeld/Platte C	Trans Carriers	see file for lot#	27,000	Order#50116
				Sub Total By Ship to			27,000	
				Total by Item No:			55,000	✓
1/31/2002	3040	Diuron B Grade	4-22325	Odom	Trans Carriers	52@1000lbs ea	31,200	Order#50186 rel#1
				Sub Total By Ship to			31,200	
				Total by Item No:			31,200	✓

Monday, February 04, 2002

Acifluorfen Production by Period by Batch From 1/2

To 2/1

		41700	41020	41710	41010	41720	41740	45090	90200				5120	
Started	Bx	Mixed Acid	Nitric Acid	A Anhydride	Sulfuric Acid	E Dichloride	Perklone D	50% Caustic	R118118	Acifluorfen	% AI	100% AI	100% Kg	Misc
1/1/2002	01	0	1,567	4,400	1,020	0	0	0	16,500	14,840	38.40%	5,699	2,585	
1/1/2002	02	0	1,582	4,290	1,030	0	0	16,050	16,500	14,930	38.80%	5,494	2,492	
1/2/2002	03	0	1,574	4,250	760	0	0	12,610	16,500	14,050	37.41%	5,256	2,384	
1/3/2002	04	0	1,577	4,310	980	0	0	18,290	16,500	13,960	39.50%	5,614	2,501	
1/4/2002	05	0	1,610	4,410	1,000	0	0	0	16,500	14,590	39.50%	5,763	2,614	
1/4/2002	06	0	1,567	4,400	960	0	0	29,560	16,500	14,120	38.80%	5,479	2,485	
1/5/2002	07	0	1,567	4,400	960	0	0	13,352	16,500	13,940	38.35%	5,346	2,425	
1/6/2002	08	0	1,585	4,290	1,000	0	0	0	16,500	17,360	33.80%	5,868	2,662	
1/6/2002	09	0	1,600	4,400	1,000	0	0	24,350	16,500	12,950	39.70%	5,141	2,332	
1/7/2002	010	0	1,567	4,400	1,200	0	0	21,840	16,500	14,120	40.40%	5,704	2,588	
1/7/2002	011	0	1,576	4,320	1,000	0	0	12,336	16,500	13,800	40.30%	5,561	2,523	
1/9/2002	012	0	1,469	3,860	640	0	0	0	18,500	13,590	39.60%	5,382	2,441	
1/9/2002	013	0	1,583	4,300	1,000	0	0	21,570	16,500	13,930	40.10%	5,586	2,534	
1/10/2002	014	0	1,539	4,180	1,070	0	0	0	16,500	13,950	39.00%	5,441	2,468	
1/10/2002	015	0	1,594	4,330	1,000	0	0	13,430	16,500	14,060	39.20%	5,512	2,500	
1/11/2002	016	0	1,626	4,160	970	0	0	0	16,500	14,130	39.00%	5,511	2,500	
1/11/2002	017	0	1,585	4,310	1,000	0	0	13,044	16,500	13,800	38.70%	5,341	2,422	
1/12/2002	018	0	1,640	4,410	500	0	0	28,360	16,500	13,780	38.40%	5,282	2,400	
1/13/2002	019	0	1,656	4,470	800	0	0	0	16,500	13,910	39.50%	5,494	2,492	
1/13/2002	020	0	1,543	4,060	920	0	0	12,004	16,500	14,160	39.20%	5,551	2,518	
1/14/2002	021	0	1,562	4,280	900	0	0	0	16,500	13,690	40.00%	5,476	2,484	

<i>Started</i>	<i>Bx</i>	<i>41700 Mixed Acid</i>	<i>41020 Nitric Acid</i>	<i>41710 A Anhydride</i>	<i>41010 Sulfuric Acid</i>	<i>41720 E Dichloride</i>	<i>41740 Perklone D</i>	<i>45090 50% Caustic</i>	<i>90200 R118118</i>	<i>Acifluorfen</i>	<i>% AI</i>	<i>100% AI</i>	<i>5120 100% Kg</i>	<i>Misc</i>
1/14/2002	022	0	1,494	3,960	1,000	0	0	19,240	16,500	15,420	37.80%	5,829	2,644	
1/15/2002	023	0	1,471	4,000	820	0	0	8,320	16,500	13,050	40.90%	5,337	2,421	
1/16/2002	024	0	1,551	4,200	500	0	0	0	16,500	13,390	41.90%	5,610	2,545	
1/16/2002	025	0	1,472	4,000	1,120	0	0	13,384	16,500	13,680	39.80%	5,445	2,470	
1/17/2002	026	0	1,520	4,080	1,020	0	0	5,116	16,500	13,200	41.60%	5,491	2,491	
1/18/2002	027	0	1,561	4,050	500	0	0	0	16,500	13,010	41.60%	5,412	2,455	
1/18/2002	028	0	1,608	4,360	1,460	0	0	12,444	16,500	14,220	40.10%	5,702	2,687	
1/19/2002	029	0	1,484	3,750	800	0	0	0	16,500	14,160	40.76%	5,772	2,618	
1/19/2002	030	0	1,615	4,380	900	0	0	13,512	16,500	14,050	40.20%	5,648	2,562	
1/20/2002	031	0	1,645	4,380	1,020	0	0	5,932	16,500	14,880	38.93%	5,793	2,628	
1/21/2002	032	0	1,608	4,320	910	0	0	0	16,500	14,000	40.64%	5,690	2,581	
1/21/2002	033	0	1,572	4,280	1,180	0	0	13,844	16,500	14,540	39.30%	5,714	2,592	
1/22/2002	034	0	1,605	4,340	800	0	0	0	16,500	14,130	38.76%	5,477	2,484	
1/22/2002	035	0	1,568	4,250	1,050	0	0	13,004	16,500	13,860	37.61%	5,213	2,364	
1/23/2002	036	0	1,618	4,150	1,000	0	0	16,128	16,500	15,200	40.45%	6,148	2,789	
1/24/2002	037	0	1,567	4,250	1,010	0	0	0	16,500	13,040	40.22%	5,245	2,379	
1/24/2002	038	0	1,600	4,250	1,000	0	0	8,280	16,500	14,400	40.52%	5,835	2,647	
1/25/2002	039	0	1,557	4,620	1,000	0	0	15,340	16,500	13,930	41.78%	5,820	2,640	
1/26/2002	040	0	1,629	4,320	1,000	0	0	4,880	16,500	13,650	41.76%	5,700	2,586	
1/27/2002	041	0	1,570	4,250	1,150	0	0	7,400	16,500	13,640	41.34%	5,639	2,558	
1/28/2002	042	0	1,567	4,250	1,100	0	0	0	16,500	13,760	41.81%	5,763	2,610	
1/28/2002	043	0	1,568	4,150	1,070	0	0	11,892	16,500	13,470	41.20%	5,550	2,517	
1/29/2002	044	0	1,763	4,150	910	0	0	0	16,500	13,650	41.25%	5,631	2,554	

		41700	41020	41710	41010	41720	41740	45090	90200				5120	
Started	Bx	Mixed Acid	Nitric Acid	A Anhydride	Sulfuric Acid	E Dichloride	Perklone D	50% Caustic	R118118	Acifluorfen	% AI	100% AI	100% Kg	Misc
1/29/2002	045	0	0	4,280	1,120	0	0	15,524	16,500	13,580	41.60%	5,649	2,562	
1/30/2002	046	0	1,562	4,260	870	0	0	0	16,500	0	0.00%	0	0	
1/30/2002	047	0	0	4,150	500	0	0	8,092	16,500	0	0.00%	0	0	
1/31/2002	ww	0	0	0	0	0	0	10,360	0	0	0.00%	0	0	
Report Totals:		0	70,942	199,660	44,520	0	0	439,468	775,500	631,570	39.66%	250,511	113,631	

Monday, February 04, 2002

Acifluorfen Materials Received for the Period From 1/1 To 1/31

Date	Item No	Product	Receiver	Supplier	Shipper	Bill of Lading	Container	Qty	
1/16/2002	41010	Sulfuric Acid	19881	El Dorado	Miller		523234	21,880	27,080lbs unloaded@unit
Sub Total by Supplier:								21,880	
Sub Total by Item:								21,880	
1/15/2002	41020	Nitric Acid	19880	El Dorado	Miller		523125	26,460	22,840lbs unloaded@unit
1/18/2002	41020	Nitric Acid	19898	El Dorado	Miller		523491	30,640	18,800 unloaded @unit6
Sub Total by Supplier:								57,100	
Sub Total by Item:								57,100	
1/12/2002	41710	A Anhydride	19863	Celanese	Groendyke		501948	45,280	
1/17/2002	41710	A Anhydride	19887	Celanese	Groendyke		3008	45,140	
1/22/2002	41710	A Anhydride	19911	Celanese	Groendyke		512686	45,060	
1/30/2002	41710	A Anhydride	19950	Celanese	Groendyke		3466	44,720	
Sub Total by Supplier:								180,180	
Sub Total by Item:								180,180	
1/31/2002	41740	Perklone D	19952	JSL Chemical	Wynne Transport		3433	24,580	
Sub Total by Supplier:								24,580	
Sub Total by Item:								24,580	
1/9/2002	90200	R118118	19840	Syngenta	Superior		BLKU120041-1	45,000	
1/17/2002	90200	R118118	19888	Syngenta	Superior		BLKU120126-0	44,420	
1/18/2002	90200	R118118	19896	Syngenta	Superior		BLKU120301-0	45,000	
1/21/2002	90200	R118118	19905	Syngenta	Superior		BLKU120395-6	44,920	
1/25/2002	90200	R118118	19925	Syngenta	Superior		BLKU120400	44,700	
1/25/2002	90200	R118118	19920	Syngenta	Superior		BLKU120273-3	44,680	
1/29/2002	90200	R118118	19944	Syngenta	Superior		BLKU120178-4	44,940	
Sub Total by Supplier:								313,680	
Sub Total by Item:								313,680	

Cyclanilide Raw Materials Used

From: 1/2

TO: 2/1

Started	Rx#	2,4 DCA	CPDM	41200 Xylene	Sodium Meth	46240 Formic Acid	45090 50% Caustic	Wet Cake Prod
12/30/2001	781030	0	0	0	0	1,000	1,224	3,319
12/31/2001	781031	0	0	0	0	1,000	2,550	3,101
1/1/2002	781032	1,761	1,761	1,500	2,283	1,020	2,020	1,534
1/1/2002	781033	1,762	1,764	1,500	2,283	1,000	3,030	3,172
1/2/2002	781034	1,774	1,763	1,500	2,283	1,050	3,182	2,439
1/3/2002	781035	1,763	1,763	1,500	2,283	1,000	2,020	3,352
1/4/2002	781036	1,771	1,763	1,500	2,283	967	2,886	2,610
1/4/2002	781037	1,763	1,764	1,500	2,283	1,000	2,020	3,287
1/8/2002	781038	1,764	1,764	1,500	2,283	1,037	2,632	2,926
1/6/2002	781039	1,776	1,754	1,500	2,283	949	3,060	3,073
1/6/2002	781040	1,771	1,747	1,500	2,283	946	5,855	3,100
1/7/2002	781041	0	0	0	0	0	0	3,553
1/7/2002		1,771	0	1,500	2,283	1,010	2,295	0
1/8/2002	781042	1,774	0	1,500	2,283	0	0	0
1/8/2002		0	0		0	0	0	2,892
1/9/2002	781043	1,763	1,767	1,500	2,283	1,000	3,030	2,629
1/8/2002	781044	1,765	1,761	1,500	2,283	943	2,020	3,760
1/10/2002	781045	1,763	1,763	1,500	2,283	0	0	0
1/10/2002		0	0	0	0	1,000	3,030	2,309

Monday, February 04, 2002

Page 1 of 5

AB0000080727

<i>Started</i>	<i>Bx#</i>	<i>2,4 DCA</i>	<i>CPDM</i>	<i>41200 Xylene</i>	<i>Sodium Meth</i>	<i>46240 Formic Acid</i>	<i>45090 50% Caustic</i>	<i>Wet Cake Prod</i>
1/10/2002	781046	0	1,783	0	2,283	973	0	2,907
1/10/2002		1,763	0	1,500	0	0	0	0
1/11/2002	781047	1,763	1,763	1,500	2,283	1,020	3,030	3,029
1/11/2002	781048	1,763	1,763	1,500	2,283	992	3,030	2,600
1/12/2002	781049	1,764	1,763	1,500	2,283	100	3,030	2,697
1/13/2002	781050	1,765	1,765	1,500	2,283	0	0	0
1/13/2002		0	0	0	0	1,037	2,550	2,802
1/13/2002	781051	1,763	0	1,500	0	0	0	0
1/13/2002		0	1,767	0	2,283	900	3,030	0
1/13/2002		0	0	0	0	0	0	2,235
1/14/2002	781052	0	0	0	0	875	3,030	2,688
1/14/2002		1,760	1,760	1,500	2,283	0	0	0
1/16/2002	781053	0	0	0	0	876	1,020	2,657
1/16/2002		1,764	1,764	1,500	2,283	0	0	0
1/15/2002	781054	0	1,763	0	2,283	889	2,611	3,503
1/15/2002		1,763	0	1,500	0	0	0	0
1/16/2002	781055	1,763	1,763	1,500	2,283	900	2,020	2,882
1/17/2002	781056	1,760	1,763	1,500	2,283	887	2,495	0
1/17/2002		0	0	0	0	0	1,262	3,924
1/17/2002	781057	1,767	1,765	1,500	2,283	0	0	0

<i>Started</i>	<i>Bx#</i>	<i>2,4 DCA</i>	<i>CPDM</i>	<i>41200 Xylene</i>	<i>Sodium Meth</i>	<i>46240 Formic Acid</i>	<i>45090 50% Caustic</i>	<i>Wet Cake Prod</i>
1/17/2002	781057	0	0	0	0	1,061	2,373	1,045
1/18/2002	781058	1,763	1,764	1,500	2,283	950	2,525	3,062
1/18/2002	781059	1,763	1,763	1,500	2,283	950	2,525	2,416
1/19/2002	781060	1,763	1,776	1,500	2,283	975	2,525	3,223
1/19/2002	781061	1,768	1,763	1,500	2,283	943	2,020	0
1/19/2002		0	0	0	0	0	0	4,691
1/20/2002	781062	1,763	0	1,500	0	0	0	0
1/20/2002		0	1,761	0	2,283	905	2,020	0
1/20/2002		0	0	0	0	0	0	2,105
1/21/2002	781063	1,783	1,763	1,500	2,283	0	0	0
1/21/2002		0	0	0	0	984	2,525	2,637
1/22/2002	781064	1,763	1,763	1,500	2,283	1,146	4,212	2,541
1/22/2002	781065	1,765	1,760	1,500	2,283	1,013	0	0
1/22/2002		0	0	0	0	0	0	2,166
1/23/2002	781066	0	0	0	0	1,047	2,642	2,739
1/23/2002		1,764	1,764	1,500	2,283	0	0	0
1/23/2002	781067	0	0	0	0	942	2,703	0
1/23/2002		0	0	0	0	0	0	2,824
1/23/2002		1,763	0	1,500	2,283	0	0	0
1/24/2002	781068	1,784	1,764	1,500	2,283	0	0	0

<i>Started</i>	<i>Bx#</i>	<i>2,4 DCA</i>	<i>CPDM</i>	<i>41200 Xylene</i>	<i>Sodium Meth</i>	<i>46240 Formic Acid</i>	<i>45090 50% Caustic</i>	<i>Wet Cake Prod</i>
1/24/2002	781068	0	0	0	0	1,079	2,550	4,548
1/24/2002	781069	1,764	0	1,500	0	0	0	0
1/24/2002		0	1,763	1,500	2,283	1,092	3,030	2,261
1/25/2002	781070	1,764	1,763	1,500	2,283	942	2,020	2,897
1/26/2002	781071	1,763	1,763	1,500	2,283	942	2,020	3,146
1/26/2002	781072	0	0	0	0	0	0	4,460
1/26/2002		1,765	1,763	1,500	2,283	1,101	2,499	0
1/27/2002	781073	1,763	1,763	1,500	2,283	0	0	0
1/27/2002		0	0	0	0	992	2,020	2,974
1/27/2002	781074	1,764	0	1,500	0	0	0	0
1/27/2002		0	1,762	0	2,283	1,031	5,353	0
1/27/2002		0	0	0	0	0	0	2,781
1/28/2002	781075	0	0	0	0	1,050	2,020	3,178
1/28/2002		1,763	1,766	1,500	2,283	0	0	0
1/28/2002	781076	0	0	0	0	0	0	2,524
1/28/2002		0	1,785	0	2,283	1,050	2,525	0
1/28/2002		1,760	0	1,500	0	0	0	0
1/29/2002	781077	0	0	0	0	0	1,010	2,630
1/29/2002		1,763	1,764	1,500	2,283	0	0	0
1/29/2002	781078	1,763	0	1,500	0	0	0	0

<i>Started</i>	<i>Bx#</i>	<i>2,4 DCA</i>	<i>CPDM</i>	<i>41200 Xylene</i>	<i>Sodium Meth</i>	<i>46240 Formic Acid</i>	<i>45090 50% Caustic</i>	<i>Wet Cake Prod</i>
1/29/2002	781078	0	1,762	0	2,283	942	3,030	0
1/29/2002		0	0	0	0	0	0	3,578
1/30/2002	781079	1,765	1,763	1,500	2,283	942	3,030	0
1/30/2002		0	0	0	0	0	3,030	2,683
1/31/2002	781080	1,764	1,765	1,500	2,283	0	0	0
1/31/2002	781081	1,763	1,763	1,500	2,283	0	0	0
		88,225	82,882	76,500	114,150	46,450	128,169	146,069

5170										
Date Entered	Date Started	Rx#	Wet Cake Used	Chunk Drs Used	Bx No Charged	No Drums	Cyclanilide Lbs Prod	Chunk Drs Prod	Chunk material on hand	Misc
1/31/2002	1/29/2002	7811019	0	0		54	5,940	1,171	0	
2/1/2002	1/31/2002	7811020	7,053	1,171	43,77	0	0	0	0	
			71,551	12,368		555	61,050	11,946	0	

Monday, February 04, 2002

TA Transferred In From 1/2 To: 2/1

<i>Date Entered</i>	<i>Date Received</i>	<i>Received From</i>	<i>17000 Supersacks</i>	<i>17120 25 KG Bxs</i>	<i>17270 Tris-Ultra Pure</i>	<i>17280 Tris Hcl 25Kg</i>	<i>17350 Tris UP Bulk Kg</i>	<i>Misc</i>
1/31/2002	1/29/2002	BPS-19948	279	0	0	0	0	<i>1-Supersack</i>
1/31/2002	1/29/2002	BPS-18948	200	0	0	0	0	this was 1 dr @200lbs
1/31/2002	1/29/2002	BPS-19948	275	0	0	0	0	this was 1dr @ 275lbs
			754	0	0	0	0	

2-AB Production

Tuesday, February 05, 2002

From: 1/2 To: 2/1

<i>Entered</i>	<i>Started</i>	<i>Batch#</i>	<i>Full Drs</i>	<i>Partial Drs</i>	<i>Total Lbs</i>	<i>17380 Total Kgs</i>	<i>Misc</i>
1/9/2002	10/20/2001	9316001	8	0	3,456	1,568	corrected prod
1/9/2002	11/9/2001	9316002	1	0	432	198	corrected prod
1/9/2002	11/15/2001	9316003	1	0	432	198	corrected prod
1/9/2002	11/27/2001	9316005	2	0	864	392	corrected prod
1/9/2002	12/15/2001	9316009	-1	0	-432	-198	
1/9/2002	1/7/2002	9316012	10	1	4,320	1,960	1 part @321
			21	1	9,072	4,116	

RICECO

SUITE 2428 - 5100 POPLAR AVENUE - MEMPHIS, TN 38137

PHONE: 901-684-5390

FAX: 901-684-5391

DATE: 02-07-02
NAME: Keith Guidroz
FIRM: Gilscot Guidroz
FAX: 504-731-1998
FROM: Catalina Henao
PHONE: (901)2605401
EMAIL: catalina.henao@ricecolic.com
C.C: Lisa Walker

NO. OF PAGES:
(INCLUDING COVER)

5

Please get Booking for:

Importer:	Aventis Cropscience -
Ship To:	Bangkok
P/O No:	22102001
Our order No :	28689
Ready on Factory on:	
To ship on:	02/20/02
Bags:	408
Vessel:	OOCL AMERICA V58
Special Notes:	C/O : 02/12/02
	Please find attached the order No 28689 and Marks
	Instructions
	Coordinate with Lisa Walker

Thank you,

Catalina Henao

OK
w
Ship 2/11/02
10mm



5100 Poplar Ave., Suite 242B
 Memphis, TN 38137
 U.S.A.
 Phone : (888)-835-1313
 Fax : (901)-684-5391

Confirmation

Customer AVENTIS CROPSCIENCE(THAI) FL.17-18 PANJATHANI TOWER, 127/22-2 10120 BANGKOKNONSEE YANNAWA THAILAND
--

Buyer Name

Destination AVENTIS CROPSCIENCE(THAI) FL.17-18 PANJATHANI TOWER, 127/22-2 10120 BANGKOKNONSEE YANNAWA THAILAND

Order Number Order Date Customer P.O.NUM. Incoterms Currency Gross Weight Net Weight	28689 01/30/2002 22102001 CFR DESTINATION USD US Dollar 11220.000 KG 10200.000 KG
---	---

Information Sales Ref. Num Proforma Inv.Num LOC Num Payment Terms Special Label	Area Manager Packing BL30 Net 30 days from B/L date SHIPPING MARKS - Attached	90169 Rafael Vega 25 KG/ BAG
Shipping Instructions 20' CONTAINER		
Special Instructions TO CHECK CUSTOMER P.O		

Sales Order Details				
Item	Material Description	Quantity	Unit Price	Amount
0010	12013 FLAKE TECH-C 25KG Plant : 401 West Helena Plant (RiceCo) Shipping Point : 4010 West Helena (RiceCo)	10,200 KG	3.70 per 1 KG	37,740.00
			Ex-Plant	37,740.00
			Total Amount	37,740.00

Aventis CropScience**Aventis****Vendor: RICECO LLC**

5100 POPLAR AVENUE, MEMPHIS

TENNESSEE 38137, U.S.A.

TEL: 001-1-901-6845381, F: 901-6845391

ATTN: MRS. M. SAM BONDURANT/MR. YAFABE

Ship to: AVENTIS CROPSCIENCE (THAILAND)

17-18th FL. PANJATHANI TOWER

127/22-23 NONSEE RD. CHONGNONSEE

YANNAWA, BANGKOK 10120.

Aventis CropScience (Thailand) Ltd.127/22-23 Panjathani Tower, 17th-18th Floor, Nong Nuee Rd., Chongnonsee

Yannawa, Bangkok 10120 Tel. (662) 6811126 Fax. (662) 6811124

โทรสาร 6811125 อีเมล (662) 6811126

127/22-23 ถนนนงนุช ชั้น 17-18 ถนนสุขุมวิท แขวงคลองตันเหนือ เขตวัฒนา กรุงเทพฯ 10120

Tel. (662) 6811126 อีเมล (662) 6811126

Purchase Order

No.: 22102001

Date: 30/01/2002

Page No: 1/1

Regulation No.: BPLB-2975

Regulation Date: 30/01/2002

Charge to: 1314150020000000

Requisitioner: Sales Forecast

Documents to be submitted
immediately to:
Panjathani Tower, 17th Fl.
127/22 Nonsee Road,
Chongnonsee, Yannawa
Bangkok 10120, Thailand

Suthama C.- Purchasing

Attn:

Shipping Marks
AVENTIS
PROPANIL TECH
BCL-221-02-001
Batch/Lot No....
BANGKOK

Vendor ID	Delivery Date	Cancellation Date
ONR206	ETA-BKK 05/02/2002	-
Payment Term	Ship Via	Shipment Condition
T/T 30 DAYS	SEA	CIF

Item No.	Quantity	Unit	Description	Unit price	Total Amount
CNRAPRO95421	10,200.00	KG	PROPANIL TECHNICAL FLAKE 25 KG ในแพคเกจ แพคเกจ หนัก 25 กก. Packing : 25 Kgs. x 408 bags REMARKS: - Please confirm acceptance of order and advise shipment details immediately. - Shipping Marks has to be strictly shown on B/L & on individual pack as per instruction. - Shipping done directly courier to Suthama	3.70	37,740.00
Remarks: Please confirm acceptance of order & advise shipment immediately. Shipping marks has to be strictly shown on B/L as per requirement.					
(USD thirty-seven thousand seven hundred forty only)					Grand Total 37,740.00

Remarks: Documents must be courier to consignee immediately;

1. Invoice: 3 signed originals + 3 copies, showing: Unit & total CIF price or CIF + I

- Total FOB value, Freight & Insurance charge, Terms of Payment, Net & Gross weight per pack, Country of Origin in English.

2. Bill of Lading: 3 signed original + 3 copies,

3. Insurance certificate in triplicate

4. 3 signed Certificate of Analysis and Certificate of Origin.

Insurance: Goods purchased on C&F terms must be covered by first class insurance policy of invoice value plus at least 10% cover all risks from warehouse to warehouse via Bangkok including war, strikes, riots and civil commotions. No transhipment whatsoever is allowed in the insurance policy.

Special Instructions: 1. Partial shipment is not allowed. 2. Transshipment is not allowed. 3. On-dock shipment is not allowed. 4. When shipping various goods one B/L, please separate invoices according to guide numbers hereunder. 5. All foreign bank charges are for beneficiary's account.

Aventis CropScience (Thailand) Ltd.

[Signature]
Authorized Signature

LWalker

From: "Ada" <adav@gilscot.com>
To: <Catalina.Henao@ricecolc.com>
Cc: "Ilsa walker" <lwalker@cvrtmail.com>
Sent: Thursday, February 07, 2002 9:50
Subject: RE: ORDER 28689

BOOKING CONFIRMATION

TO: CATALINA

DATE: 2/7/02

SHIPPER: RICECO

ORDER REF: 28689

NO. PCS & WEIGHT: 1X20' CONT FLAKE TECH-C

BKG NO.: ATLC9647

VESSEL: OOCL GERMANY V9

C/O: 2/12

SLG: 2/20

ETA: 3/14

SS CO.: BAL-NYK LINE

PLACE OF RECEIPT: MEMPHIS

LOAD PORT: LOS ANGELES

DESTINATION PORT: BANGKOK

SUPPLIER/PICK UP LOCATION: CED AR

**DELIVERY INFO: GILSCOT C/O BAL-NYK LINE
BURLINGTON NORTHERN
5280 SHELBY DR.
MEMPHIS, TN**

**THANKS,
ADA VINCENT
GILSCOT GUIDROZ INTL, INC.**

2/7/2002

AB0000025483



RiceCo L.L.C.
5100 Poplar Ave., Suite 2428
Memphis, TN 38137
U.S.A.

TEL: (888) 838-1313

ATTN: LISA

Purchase order

Bill To:

RiceCo L.L.C.
5100 Poplar Ave., Suite 2428
Memphis, TN 38137
U.S.A.

CEDAR CHEMICAL CORPORATION
P.O. BOX 2900, DEPARTMENT 161
MEMPHIS TN 38101-2900

Ship To:

West Helena Plant (RiceCo)
Highway 48 Bypass
West Helena AR 72390

PO Number 4500018329
Date 01/15/2002
Vendor No. 112619
Vendor Phone 901-260-6425
Vendor Fax 901-684-5399
Currency USD
Payment Terms Net 60 days from invoice date
Buyer Kathy Liebenow
Phone 901-684-5368
Fax 901-684-5391
Ship Via
Delivery Date 01/30/2002

Item	Quantity	Unit	Price	Amount
0010 12013 FLAKE TECH-C 25KG	95,000.000	KG	3.43	325,850.00
Net Value				325,850.00
Total Amount				325,850.00
<i>5 LOADS OF 760/25 Kg BAGS</i>				

INSTRUCTIONS TO VENDOR:

This Purchase Order is subject to the Terms and Conditions incorporated herein as listed on the last 2 pages of this document.

SIGNATURE

(Purchasing)

DATE

STRAIGHT BILL OF LADING - SHORT FORM - Original - Not Negotiable

REV. A *TANK CARS ARE LOADED TO FULL SHELL GALLONAGE CAPACITY

NAME OF CARRIER NW ROWLAND

CARRIER'S NO. _____

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading.

NOTE- Where the rate is dependent on value shippers are required to state specifically in writing the agreed or declared value of the property
The agreed or declared value of the property is hereby specifically stated by the shipper to be exceeding

The property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), received, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to the usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party of any time interested in all or any of said property, that every carrier to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official, Southern, Western and Illinois Freight Classification in effect on the date hereof, if this is a rail or a rail-carrier shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.
Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, as far as the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his consignee.

CONSIGNEE TO (Mail or street address of consignee - For purposes of notification only.)

GILSCOT GUIDROZ
C/O BAL-NYK LINE BURLINGTON NORTHERN
5280 SHELBY DRIVE
MEMPHIS, TN

*DELV. ADDRESS

COUNTY

SOLD TO:

AVENTIS

Per _____

(Signature of consignor)

FROM:

RICECO
5100 POPLAR AVENUE
SUITE 2428
MEMPHIS, TN 38137

FOR CHEMICAL EMERGENCY -
SPILL, LEAK, FIRE, EXPOSURE
OR ACCIDENT, CALL CHEMTREC -
DAY OR NIGHT 1-800-424-9300.

If charges are to be prepaid, write or stamp here, "To be Prepaid."

PREPAID

Rec'd \$ _____ to apply in prepayment of the charges on the property described hereon.

Agent or Cashier.

Per _____
(The signature here acknowledges only the amount prepaid.)

Charges advanced:

\$ _____

SHIPPERS NUMBER

No R - 01291

CUSTOMER ORDER NO.

22102001

RICECO ORDER NO.

28689

DATE SHIPPED

2/13/02

BOOKING#

ATLC9647

CAR VEHICLE INITIALS & NUMBER

TR-362892-4

3060

GROSS WT.

23,664

TARE

NET WEIGHT

POUNDS 22,440

TONS

ANALYSIS

Cedar # 50262

(*To be filled in only when shipper desires and governing tariffs provide for delivery thereof.)
ROUTING

NUMBER &	TYPE OF PACKAGES	Check if hazardous material	Description of Articles, Special Marks & Exceptions	QUANTITY	BASIS	WEIGHTS
408	25 KG BAGS		CHEMICALS, N.O.I., PROPANIL TECHNICAL - FLAKED			55 LBS. NET EACH 58 LBS. GROSS EACH
SEAL#	20374		BOOKING# ATLC9647 STEAMSHIP LINE: BAL-NYK LINE VESSEL: OOCL GERMANY V9 DESTINATION PORT: BANGKOK			FL02203-01=102 FL01229-01=87 FL01228-01=116 LOT# FL02203-02=67 FL02202-01=86 TOTAL=408

*This is to certify that the above named articles are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

RICECO

Per Bernie ForgasShipper Bernie Forgas

Per

The description and weights indicated on this bill of lading are correct, subject to verification by the Weighing and Inspection Bureau having jurisdiction, according to agreement.

RICECO

Shipper:

PER Bernie Forgas

* Shipper's Imprint in lieu of stamp: not a part of bill of lading approved by the Interstate Commerce Commission.

*THE CONTAINERS USED FOR THIS SHIPMENT ARE MARKED AS REQUIRED TO INDICATE COMPLIANCE WITH THE REQUIREMENTS OF THE GOVERNING RAIL OR MOTOR FREIGHT CLASSIFICATION

+PARTIAL NO.

+CAR SEAL

+DUNNAGE

+ORDER BILLING DETAIL

Permanent post office address of shipper:

RICECO, 5100 POPLAR AVE., SUITE 2414, MEMPHIS, TN 38137

ORIGINAL
AB0000025480

NAME OF CARRIER

W. L. Rowland

CARRIER'S NO.

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading.

NOTE - Where the rate is dependent on value shippers are required to state specifically in writing the agreed or declared value of the property

The agreed or declared value of the property is hereby specifically stated by the shipper to be exceeding

The property described below, in apparent good order, except as noted hereon and condition of contents of packages unknown, marked, consigned, and delivered as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier at all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every device to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading on form (1) as Official, Southern, Western, and Illinois Freight Classification in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof set forth in the classification or tariff which governs the transportation of the shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

CONSIGNEE TO (Mad or street address of consignee - For purposes of notification only.)

GILSCOT GUIDROZ
C/O BAL/NYK LINE BURLINGTON NORTHERN RR
5280 SHELBY DRIVE
MEMPHIS, TN

*DELY. ADDRESS

COUNTY

SOLD TO:

FEUDERSEN

Subject to Section 7 of conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement.

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

RICECO

Per

(Signature of consignor)

FROM:

RICECO
5100 POPLAR AVENUE
SUITE 2428
MEMPHIS, TN 38137

FOR CHEMICAL EMERGENCY -
SPILL, LEAK, FIRE, EXPOSURE
OR ACCIDENT, CALL CHEMTREC -
DAY OR NIGHT 1-800-424-9300.

If charges are to be prepaid, write or stamp here, "To be Prepaid." **PREPAID**

Rec'd \$_____ to apply in prepayment of the charges on the property described hereon.

Agent or Cashier.

Per

(The signature here acknowledges only the amount prepaid.)

Charges advanced:

\$_____

SHIPPER'S NUMBER

No R - 01281

CUSTOMER ORDER NO.

115246

RICECO ORDER NO.

28673

DATE SHIPPED

2-11-02

BOOKING# ATLC9541

CAR VEHICLE INITIALS & NUMBER

TJN 4470158-4

3060

GROSS WT.

44.080

TARE

NET WEIGHT

POUNDS 41,800

TONS

ANALYSIS

(*To be filled in only when shipper desires and governing tariffs provide for delivery thereof.)

ROUTING

NUMBER &	TYPE OF PACKAGES	Check if hazardous material	Description of Articles, Special Marks & Exceptions	QUANTITY	BASIS	WEIGHTS
760	25 KG BAGS		CHEMICALS, N.O.I., PROPANIL TECHNICAL - FLAKED			55 LBS. NET EACH 58 LBS. GROSS EACH
SEAL#	20345		BOOKING# ATLC9541 STEAMSHIP LINE: BAL/NYK LINE VESSEL: OOCL GERMANY V09 DESTINATION PORT: BANGKOK			FL02202-01-310 FL02203-00-50 FL01229-01-100 LOT# FL01228-01-300 Total = 760

*This is to certify that the above named articles are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

RICECO

Per

Bernie Fong

Shipper

Agent

Per

Bernie Fong

The description and weights indicated on this bill of lading are correct, subject to verification by the Weighing and Inspection Bureau having jurisdiction, according to agreement.

RICECO

PER

Bernie Fong

* Shipper's Imprint in lieu of stamp: not a part of bill of lading approved by the Interstate Commerce Commission.

*THE CONTAINERS USED FOR THIS SHIPMENT ARE MARKED AS REQUIRED TO INDICATE COMPLIANCE WITH THE REQUIREMENTS OF THE GOVERNING RAIL OR MOTOR FREIGHT CLASSIFICATION

+PARTIAL NO.

+CAR SEAL

+DUNNAGE

+ORDER BILLING DETAIL

Permanent post office address of shipper:

RICECO, 5100 POPLAR AVE., SUITE 2414, MEMPHIS, TN 38137

ORIGINAL
AB0000025480



February 28, 2002

Mr. Dan Stahl
Aventis Industrial Strategy
PO Box 12014
2 TW Alexander Drive
RTP, NC 27709

Dear Dan:

This letter is to certify that the enclosed Composition of Cyclanilide is the composition of cyclanilide technical as manufactured by Cedar Chemical Corporation (CAS No. 113136-77-9).

I have enclosed one (1) notarized original for your records. Should you need further information, please do not hesitate to let me know.

Sincerely,

A handwritten signature in cursive script, appearing to read "Chris McGee".

Chris McGee
Vice President of Manufacturing

STATE OF TENNESSEE
COUNTY OF SHELBY

Sworn & subscribed before me this 28th day of Feb., 2002.

A handwritten signature in cursive script, appearing to read "Jeannette H. Britton".

Notary Public

MY COMMISSION EXPIRES
DECEMBER 1, 2002





**COMPOSITION OF CYCLANILIDE
T.G.A.I.**

**CYCLANILIDE
(Technical Grade Active Ingredient)
CAS RN [113136-77-9]**



Composition of Cyclanilide (T.G.A.I.)

The composition of cyclanilide technical as manufactured by Cedar Chemical Corp complies with the Aventis CropSciences specification (Document C017391) and is as follows:

Contents: Cyclanilide 96 - 100 % w/w (C-817-06-95)

Methods: 1. - 6. C-821-07-95
7. C-816-06-95
8. KF - Titration

Results: 1.	2,4-dichloroaniline	max. 0.1 %
2.	1-(3,4-dichlorophenylaminocarbonyl)-cyclopropane carboxylic acid	max. 0.3 %
3.	1-(2,5-dichlorophenylaminocarbonyl)-cyclopropane carboxylic acid	max. 1.0 %
4.	N,N'-bis-(2,4-dichlorophenyl)-1,1-cyclopropane dicarboxamide	max. 1.5 %
5.	3-(2,4-dichlorophenylaminocarbonyl)propyl, 1-(2,4-dichlorophenylaminocarbonyl)-1-cyclopropane carboxylate	max. 1.5 %
6.	4-[2,4-dichloro[(1-[(2,4-dichloroanilino)carbonyl]cyclopropyl)carbonyl]anilino]butanoic acid	max. 0.3 %
7.	xylene, mixed isomers	max 0.5 %
8.	water	max. 0.5 %

Certified true and correct by:

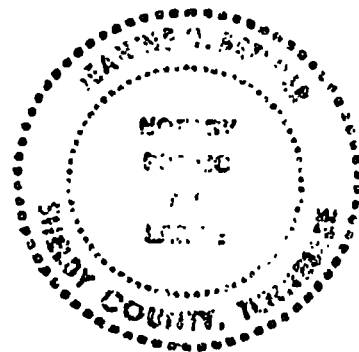
Chris McGee, Vice President of Manufacturing
Cedar Chemical Corporation

STATE OF TENNESSEE
COUNTY OF SHELBY

Sworn & subscribed before me this 28th day of Feb, 2002.

Notary Public

MY COMMISSION EXPIRES
DECEMBER 1, 2002





February 28, 2002

Mr. Dan Stahl
Aventis Industrial Strategy
PO Box 12014
2 TW Alexander Drive
RTP, NC 27709

Dear Dan:

This letter is to certify that the enclosed Manufacturing Process (Summary) of Cyclanilide and Discussion the Formation of Impurities is the manufacturing process used by Cedar Chemical Corporation to manufacture Cyclanilide (CAS No. 113136-77-9).

I have enclosed one (1) notarized original for your records. Should you need further information, please do not hesitate to let me know.

Sincerely,

A handwritten signature in cursive script, appearing to read "Chris McGee".

Chris McGee
Vice President of Manufacturing

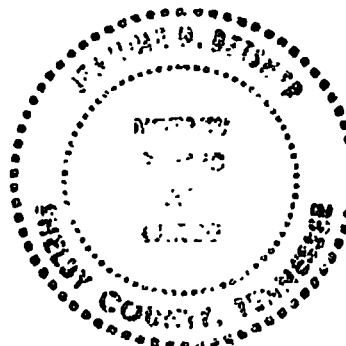
STATE OF TENNESSEE
COUNTY OF SHELBY

Sworn & subscribed before me this 28th day of Feb., 2002.

A handwritten signature in cursive script, appearing to read "Jimmie H. Batcher".

Notary Public

MY COMMISSION EXPIRES
DECEMBER 1, 2002





**MANUFACTURING PROCESS (SUMMARY) OF CYCLANILIDE AND DISCUSSION
THE FORMATION OF IMPURITIES**

**CYCLANILIDE
(Technical Grade Active Ingredient)
CAS N° 113136-77-9**

NAME AND ADDRESSEE OF THE PRODUCER

AVENTIS CROPSCIENCE
Saint Pierre
55, avenue René Cassin
CP 310
69337 LYON Cedex 09

NAME AND ADDRESSEE OF THE MANUFACTURER

Cedar Chemical Corp.
49 Phillips Road # 311
Helena,
AR 72342
USA

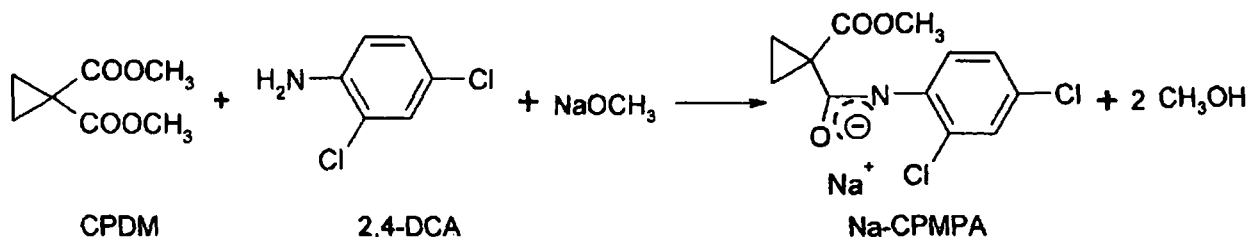
A. DESCRIPTION OF THE MANUFACTURING PROCESS

We, Cedar Chemical Corp, are producing the chemical substance cyclanilide Technical exclusively for Aventis CropScience according to the Aventis CropScience process described in document C017920.

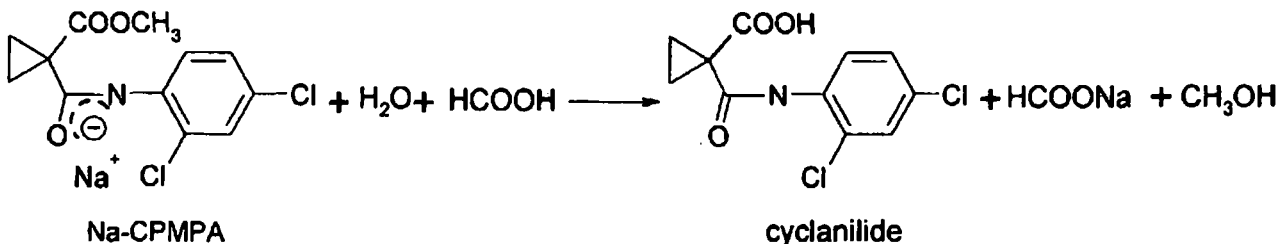
*****The following information is trade secret and property of Aventis CropScience.*****

Cyclanilide technical is produced by a 2-step integrated batch process from CPDM and 2,4-DCA. After filtration and drying, the technical product is isolated as a white solid with a purity of 97 %. The Aventis CropScience process consists of :

1. **Condensation of cyclopropane-1,1dicarboxylic acid dimethyl ester (CPDM) and 2,4dichloroaniline to obtain sodium N-(2',4'-dichlorophenyl) 1-carbomethoxycyclopropylcarboxamidate (Na-CPMPA)**



2. **Hydrolysis of the ester group of the sodium N-(2',4'-dichlorophenyl) 1-carbomethoxycyclopropyl carboxamidate (Na-CPMPA) with subsequent acidification to produce the desired 1-(2,4-dichlorophenylaminocarbonyl)-cyclopropane carboxylic acid (cyclanilide)**



B. DISCUSSION OF FORMATION OF IMPURITIES

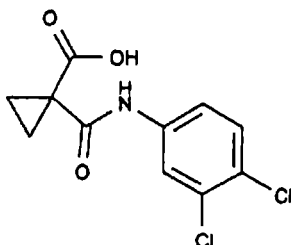
The impurities determined in technical cyclanilide are as follows :

1. *2,4-dichloroaniline*

This impurity results from an incomplete reaction during step I. It may be also formed during heating of Na-CPMPA (Step I) by a reverse reaction.

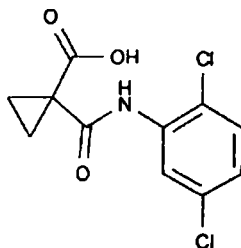
2. *1-(3,4-dichlorophenylaminocarbonyl)-cyclopropane carboxylic acid*

This impurity results from the reaction of 3,4-dichloroaniline with CPDM. 3,4-dichloroaniline is an isomer impurity of the technical 2,4-DCA starting material.



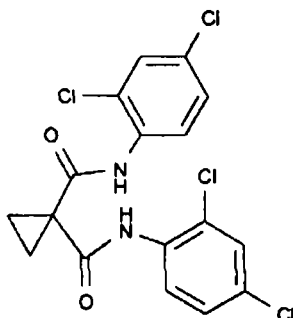
3. *1-(2,5-dichlorophenylaminocarbonyl)-cyclopropane carboxylic acid*

This impurity results from the reactions of 2,5-dichloroaniline with CPDM. 2,5-dichloroaniline is an isomer impurity of the technical 2,4-DCA starting material.



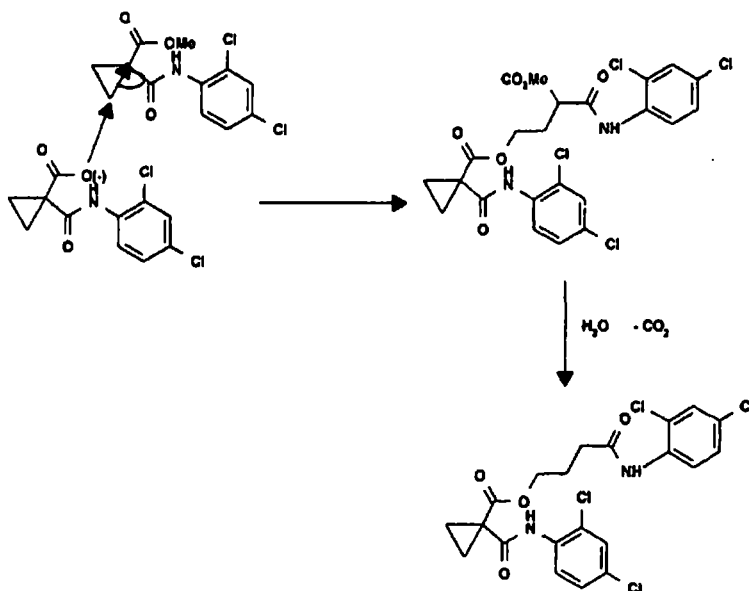
4. *N,N'-bis-(2,4-dichlorophenyl)-1,1-cyclopropane dicarboxamide*

This impurity results from a non-selective reaction of 2,4-DCA on CPDM (step I) The second ester group reacts with 2,4-DCA.



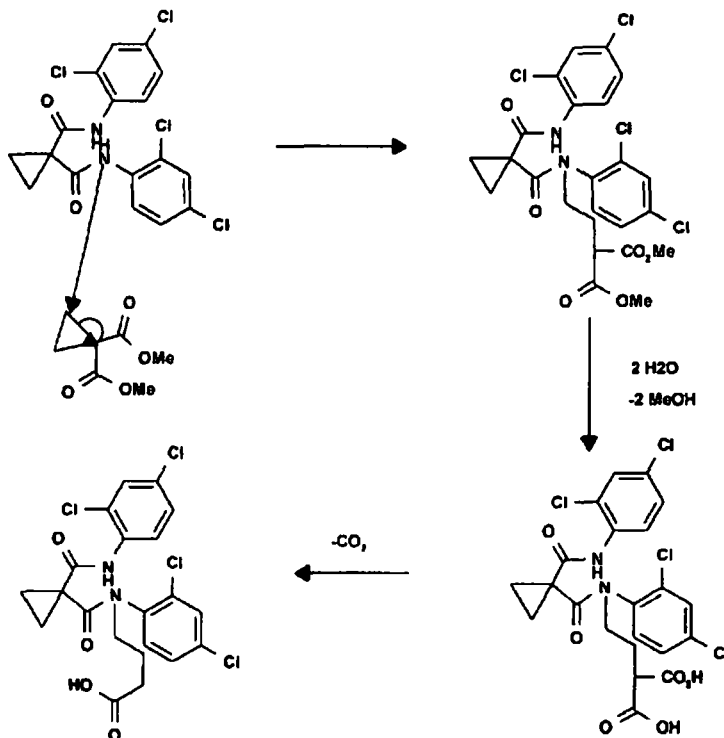
5. 3-(2,4-dichlorophenylaminocarbonyl)propyl, 1-(2,4-dichloro-phenylaminocarbonyl)-1-cyclopropane carboxylate

This impurity could result from a ring opening of CPMPA by the cyclopropane dicarboxylic acid anilide anion.



6. 4-[2,4-dichloro[N-(1-[(2,4-dichloroanilino)carbonyl]cyclopropyl)carbonyl] anilino] butanoic acid

This impurity is formed by a reaction of N,N'-bis-(2,4-dichlorophenyl)-1,1-cyclopropane dicarboxamide with CPDM resulting in a ring opening of the cyclopropane ring, followed by hydrolysis and decarboxylation of one carboxylic acid group:



7. Xylene

Xylene is the reaction solvent for steps I and II. Small quantity of xylene remains in the aqueous phase, and a part of it remains in the technical cyclanilide after drying.

8. WATER

Cyclanilide is isolated from a water suspension. Small quantity of water remains after washing and drying.

Certified true and correct by.

Chris McGee

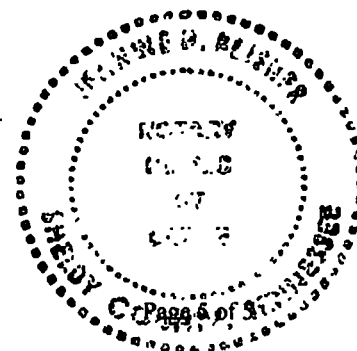
Chris McGee, Vice President of Manufacturing
Cedar Chemical Corporation

STATE OF TENNESSEE
COUNTY OF SHELBY

Sworn & subscribed before me this 28th day of Feb., 2002.

Jeanne H. Betsworth
Notary Public

MY COMMISSION EXPIRES
DECEMBER 1, 2002



Rhône-Poulenc Agro

CEDAR Chemical Corporation
Mr Geoffrey L. PRATT
5100 Poplar Ave.
Suite 2414
Memphis, TN 38137
UNITED STATES

Lyons, le 19 November 1999

Réf : fb/SR 189.99

**SUBJECT : SECRECY AGREEMENT FOR THE MANUFACTURE
 AND FORMULATION OF CYCLANILIDE**

Dear Geoffrey,

You will find herewith the two copies of the secrecy agreements which cover the information transfer of Cyclanilide process.

Thank you to send me readily one copy back.

Best regards.

7283161922



Serge RAVET
Toll manufacturing manager

Aventis CropScience



**CEDAR
Mr Chris McGEE
5100 Poplar Ave
Memphis, TN 38137
UNITED STATES**

March 1st, 2002

SRfb026.02

Subject : Cyclanilide Contract

Dear Chris,

You will find herewith the two copies of the cyclanilide contract signed on ACS side.

Thanks to send me back a copy with signature of Cedar representatives.

Yours faithfully,

A handwritten signature in black ink, appearing to read "Serge RAVET".

**Serge RAVET
Toll Manufacturing Manager**

**NOT
Executed
3/12/02**

MANUFACTURING AND SUPPLY AGREEMENT

THIS MANUFACTURING AND SUPPLY AGREEMENT (the "Agreement") is made and entered into as of January 1, 2001 (the "Effective Date") by and between **Cedar Chemical Corporation**, a Delaware corporation, having its principal place of business at Suite 2414 Clark Tower, 5100 Poplar Avenue, Memphis, Tennessee 38137 (hereinafter referred to as "Cedar"), and **Aventis CropScience Matières Actives**, a French "société en nom collectif" having its registered office at 14/20, rue Pierre Baizet, 69009 LYON, France (hereinafter referred to as "Aventis").

WITNESSETH:

- ◆ WHEREAS, Aventis desires to retain an independent third party contractor to manufacture for it Cyclanilide (hereinafter the "Product") from DCA and CPDM.
- ◆ WHEREAS, Cedar owns and operates a chemical manufacturing facility located at West Helena, Arkansas which, following installation of certain capital improvements and equipment defined below, is capable of producing Product from DCA and CPDM utilizing Aventis' manufacturing process disclosed by Aventis to Cedar pursuant to the Secrecy Agreement and processes disclosed to Cedar pursuant to the Degussa Secrecy Agreement and pursuant hereto;
- ◆ WHEREAS on August 31, 2000, the Parties signed a Memorandum of Understanding (the "MOU") whereby they agreed that they would promptly commence negotiations with each other in good faith with the intent of reaching an agreement satisfactory in form and substance to their respective managements and incorporating the terms and principles set forth herein.

NOW, THEREFORE, in consideration of the promises and the mutual covenants herein contained, the Parties hereto agree as follows:

Article 1. DEFINITIONS

When used in this Agreement, each of the capitalized terms set forth in this Article 1 shall have the meaning set forth below:

"Affiliate" means any entity that directly or indirectly, through one or more intermediaries, now or hereafter, controls or is controlled by or is under common control with a Party hereto, except that in countries where ownership of a majority or a controlling interest by a foreign entity is not permitted by law, rules or regulations, the parent's direct or indirect voting interest may be less than a majority or controlling interest. "Control" (including the terms "controls" "controlled by", "controlling" and "under common control with") are understood as meaning the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person or entity whether through the ownership of voting securities, by contract or otherwise.

"Capital Improvements" means the capital improvements described in Appendix 1.

"CPDM" means (cyclopropane- 1,1-dicarboxylic acid) dimethyl ether.

"Cyclanilide" means (1-(2,4-dichlorophenylaminocarbonyl)-cyclopropane carboxylic acid).

"DCA" means (2,4 Dichloro aniline).

"Degussa Secrecy Agreement" means the Secrecy Agreement between Aventis and Cedar dated as of November 22, 1999.

"EPA" means the Environmental Protection Agency of the United States and all applicable state agencies responsible for the protection of the environment.

"NaMO" means Sodium Methoxide.

"Non-Strategic Raw Materials" means the following raw materials: xylene, formic acid and caustic soda.

"Party" or "Parties" means Aventis and/or Cedar.

"Process" shall mean all the scientific and technical information useful for the production of Product conforming to the Specifications and shall include all related specifications, secret processes, process patents, patent applications, trade secrets, know-how, information on use and choice of equipment and raw materials, process books, quality control plans, pipe and instrument designs, methods of analysis, engineering data, installation plans and operation procedures and shall include all process information disclosed to Cedar by Aventis pursuant to the Secrecy Agreement and pursuant to the Degussa Secrecy Agreement.

"Product" means Cyclanilide.

"Plant" means the chemical manufacturing facility located at West Helena, Arkansas which is owned and operated by Cedar.

"Raw Materials" means DCA, CPDM and NaMO.

"Raw Materials Specifications" means the specifications for the Raw Materials and Non-Strategic Raw Materials attached as Appendix 2 hereto.

"Secrecy Agreement" means the Secrecy Agreement between Aventis and Cedar dated as of May 14, 1999.

"Specifications" means the specifications for the Product set forth in Appendix 3.

"Third Party(ies)" means any person or entity other than a Party or an Affiliate of a Party.

Unless otherwise stated, all clauses and articles referred to herein are clauses and articles of this Agreement.

Article 2. MANUFACTURING

- 2.1** Subject to the terms and conditions of this Agreement, Cedar hereby agrees to use the Process and any manufacturing or other information and the Raw Materials supplied to it hereunder by or on behalf of Aventis exclusively to supply Product to Aventis and shall not use such Process or information or Raw Materials to supply any entity other than Aventis or its Affiliates with Product. Cedar may not delegate, transfer or sub-contract any of its duties and obligations hereunder without the prior written consent of Aventis. If Aventis consents to such a delegation, transfer or sub-contract, Cedar shall remain liable for all such duties and obligations so delegated, transferred or sub-contracted.
- 2.2** Cedar shall perform the manufacturing operations contemplated hereunder at the Plant.
- 2.3** Aventis shall provide reasonable technical assistance to Cedar during startup of the initial campaign.

Article 3. MATERIALS

3.1 Raw Materials

- (a) Aventis or its nominee shall be responsible for supplying Cedar, at Aventis' cost and delivered to the Plant, with such amounts of Raw Materials meeting the Raw Materials Specifications, as are requested by Cedar in writing during the term of this Agreement, which Cedar shall require in order to enable Cedar to produce, in campaigns scheduled in accordance with the provisions of Article 5, all quantities of Product ordered by Aventis which have been the subject of a firm order as described in Article 5.1. Cedar shall provide Aventis with prior written notice three months in advance of the requested delivery date for any such Raw Materials.

- (b) The Raw Materials shall remain the property of Aventis until physically transformed into the Product and Cedar shall be responsible for paying Aventis the replacement cost of such Raw Materials if such Raw Materials are damaged after delivery to Cedar. Cedar shall reimburse Aventis for all of Aventis' costs in supplying Raw Materials to Cedar, if such Raw Materials are used by Cedar to produce Product, which due to Cedar's negligence or failure to follow the Process, does not meet the Specifications.
- (c) The Raw Materials remaining in the possession of Cedar on the effective date of termination or expiration of this Agreement shall, at Aventis' option, be returned to Aventis at Aventis' cost, unless such termination is a prior termination due to the condition or conduct of Cedar, in which case the cost shall be for Cedar.
- (d) If Cedar is able to obtain a more favorable price than Aventis for purchase of NaMO, following prior approval from Aventis, Cedar shall purchase and supply such quantities of NaMO as shall be required for it to perform hereunder and such NaMO shall be treated as a Non-Strategic Raw Material as described herein.

3.2 Non-Strategic Raw Materials

Cedar shall supply the Non-Strategic Raw Materials. In all cases, Cedar shall use a reasonable competitive purchasing process. Non-Strategic Raw Materials shall meet the Raw Materials Specifications given in Appendix 2. Cedar may not use Non-Strategic Raw Materials which do not meet the Raw Materials Specifications, unless Aventis has given its prior written consent.

3.3 Storage

Cedar shall maintain all inventories of Raw Materials, Non-Strategic Raw Materials and Product in good condition.

Article 4. MANUFACTURE

4.1 Production

Cedar shall, using the Process, manufacture Product which complies with the Specifications.

4.2 Specifications, Compliance

Cedar warrants that the Product shall be manufactured at all times in conformity with the Specifications and all applicable laws and regulations and registration requirements, and that all required records will be maintained in compliance therewith. Cedar warrants that the Product shall be free of any impurities resulting from the use of equipment used to manufacture Product for any other use (cross-contamination), unless Aventis has accepted such levels of impurities pursuant to Article 4.5(g) below. Cedar makes no other warranty with respect to Product hereunder, including warranties of merchantability or fitness for a particular purpose, and none shall be implied.

4.3 Retention of Samples and Records

Cedar shall maintain representative samples of the Product from each production batch for a minimum period of three (3) years. Upon request of Aventis, Cedar shall make available such retained samples to Aventis. Cedar shall also maintain production records which shall be accessible to Aventis for inspection in accordance with Article 4.4 below. Production reports shall be kept by production batch for three (3) years after production. Analytical reports of the annual production process shall be forwarded to Aventis upon its request.

4.4 Audits and Reports

On or before the 25th of each month during the term of the Agreement, Cedar shall provide Aventis with a report on the inventories, consumption and deliveries of Raw Materials and Non-Strategic Raw Materials and the manufacture, inventories and delivery of Product. Aventis shall have the right to make or have its independent auditors make an inventory audit (either physical or book inventory, or both) of the Product and Raw Materials and Non-Strategic Raw Materials, in progress and finished, from time to time, with advance notice to Cedar and at such time during Cedar's regular business hours as it may reasonably elect, and the auditors shall have access to Cedar's facilities and books and records which are relevant to this purpose. Aventis shall also have the right to audit or have audited, all invoices and documentation evidencing Cedar's costs for purchase of Non-Strategic Raw Materials.

4.5 Quality Control.

- (a) Cedar shall weigh and assay the Raw Materials sent to Cedar by Aventis for use in manufacturing the Product. Cedar's acceptance of Raw Materials delivered hereunder shall be a waiver by Cedar of claims with respect to deliveries which are damaged or do not conform to the Raw Materials Specifications unless Aventis receives notice of such a claim within thirty (30) days of delivery (or if such damage or non-conformity could not be discovered in the course of a reasonable incoming inspection, Cedar shall have the right to give notice within ninety (90) days of discovery thereof). Aventis shall replace such Raw Materials in a timely manner so as not to interfere with the production of the Product and shall be responsible for the cost of returning the non-conforming Raw Materials to Aventis.
- (b) Cedar shall perform in-process quality control for the Product as set forth in the Process, which Process shall include a quality control plan. The quality control assays shall be done in accordance with laboratory practices as required by the EPA. Cedar may perform other types of quality control for the Product as it deems necessary and advisable. Aventis may, at its discretion, spot sample and analyse the Raw Materials, Non-Strategic Raw Materials and Product. Aventis may spot sample all batches during the first campaign.
- (c) For so long as Cedar's laboratories remain certified by Aventis, Aventis will accept and take delivery of the Product on the basis of Cedar's certificates of analysis for each batch which shall accompany such deliveries. Aventis' acceptance of Product delivered hereunder shall be a waiver by Aventis of claims with respect to deliveries which are damaged or do not conform to the Specifications unless Cedar receives notice of such a claim within thirty (30) days following receipt of certificates of analysis by Aventis (or

if such damage or non-conformity could not be discovered in the course of a reasonable incoming inspection, Aventis shall have the right to give notice within ninety (90) days of discovery thereof).

- (d) Any dispute arising between the Parties as to whether a shipment lot of Product conforms with the Specifications shall be resolved by reference to the analytical methods identified in Appendix 3. If a shipment lot of Product manufactured hereunder is found not to conform with the Specifications, Cedar shall, at its expense, at the election of Aventis, either replace such non-conforming Product with conforming Product, reformulate the shipment lot to meet the Specifications, or reimburse Aventis for all of Aventis' costs relating to such Product. Should there be any disagreement between Cedar and Aventis, the Parties shall meet and negotiate in good faith and failing agreement within a period of ninety (90) days, either Party may submit the matter to the binding arbitration procedures described in Article 13 hereof.
- (e) Cedar shall inform Aventis of any unexpected deviation(s) from the operating conditions as they may have an adverse impact on the quality of the Product, even if the Product conforms to the Specifications. The Parties shall jointly examine the consequences of such deviation(s). Cedar shall not ship any such quantities of Product without the prior consent of Aventis.
- (f) Upon reasonable notice, Aventis shall have the right to have its authorised representative(s) present at the Plant to observe the manufacture of the Product and inspect the conditions of storage of the Product, Raw Materials and Non-Strategic Raw Materials. The presence of Aventis' representatives shall not relieve Cedar from any liability or of its duties or obligations under this Agreement.
- (g) Should Cedar wish to use any equipment involved in the manufacture of Product for any other production, Cedar shall identify and quantify for Aventis all resulting potential impurities in the Product which could thereby be introduced. Upon receipt of such information, Aventis will set the ARIL (Acceptable Residual Impurities Level), which Cedar shall thereupon be required to follow. If Cedar is prevented from providing Aventis any of the information described above for valid reasons arising from its contractual commitments to another client, Cedar shall provide Aventis with a contact within the other client's organization so that Aventis may seek to obtain such information.

4.6 Handling and Storage

Cedar shall provide and maintain sufficient facilities for the safe storage of the Raw Materials, the Non-Strategic Raw Materials and the Product. Cedar shall provide Aventis with a completed receiving report form upon Aventis' request. Cedar shall preserve and protect the Raw Materials, Non-Strategic Raw Materials and the Products from contamination, loss, theft, substitution, damage, degradation or destruction and shall under no circumstances use the Raw Materials or Non-Strategic Raw Materials for any purpose other than manufacture of the Product.

4.7 Insurance

Cedar shall insure the Raw Materials, Non-Strategic Raw Materials, work-in-process, and the Product against loss, damage and the like, and shall ensure that it has insurance coverage sufficient to fully insure it against all liability which it might incur in the course of performance of this Agreement. At the request of Aventis, Cedar will provide Aventis with evidence that it has subscribed to the insurance policies contemplated hereby with a reputable insurance company acceptable to Aventis, which insurance policies shall in no way exonerate or reduce Cedar's liability hereunder.

Article 5. SCHEDULING, FEE

5.1 Scheduling

Aventis shall submit its good faith estimate of its orders for Product to be produced by Cedar in each calendar year during the term of the Agreement by no later than July 1 of the previous calendar year, provided that such estimate will be for the purpose of facilitating scheduling of manufacture only and will not be binding, provided that a firm order will be issued by Aventis by October 31 of such year, which order shall specify the delivery date(s) for the Product.

5.2 Manufacturing Fee

- (a) Cedar's manufacturing fee for production of Product for Aventis during the Initial Term as defined in Article 10.1 of this Agreement shall be \$8.00 per kilogram for all Product ordered. The fee set forth above includes all amounts relating to the depreciation of the Capital Improvements referred to in Article 6 below. Commencing with the calendar year 2003 and each calendar year thereafter, the fees set forth above may be adjusted to reflect increases in manufacturing costs according to the escalation formula set forth in Appendix 4 hereto.
- (b) Notwithstanding any other term hereof, following the production campaign starting in November 2001, if Cedar determines that it is not able to manufacture Product for \$8.00 per kilogram either because: (i) Cedar has reasonably demonstrated to Aventis that the Plant can not produce on average 1.5 metric tons of acceptable Product per day; or (ii) Cedar has reasonably demonstrated to Aventis that it is unable to use the Process to manufacture Product which complies with the Specifications with a recycling rate (i.e., rate of non-conforming Product which needs to be treated to conform to the Specifications) of ten percent (10%) or less, then Cedar shall promptly communicate to Aventis a new proposed manufacturing fee for production of Product for Aventis. Aventis shall be entitled, in its sole discretion, to accept or reject such new manufacturing fee proposed by Cedar.
- (c) Cedar shall invoice Aventis at the end of each month during the term of the Agreement for all quantities of Product delivered during such month, which deliveries shall be Ex Works Plant as such term is used in the Incoterms 2000, at the applicable manufacturing fee, and for all Non-Strategic Raw Materials (including NaMO if purchased by Cedar pursuant to the terms hereof) purchased by Cedar hereunder and

used to manufacture such quantities of Product. Such invoices shall be due and payable by Aventis thirty (30) days from date of invoice. Cedar shall load the Product into the carrier selected by Aventis.

5.3 Product

- (a) Aventis shall order and Cedar shall produce from Raw Materials supplied by Aventis not less than seven hundred ninety (790) metric tons of Product during the Initial Term as defined in Article 10.1 of this Agreement. For indicative purposes, Aventis' current estimate of its yearly requirements for the Product is one hundred fifty (150) metric tons per year, provided that such figure is provided for information purposes only and will not be binding.
- (b) The Parties hereby agree that Aventis shall order and purchase, and Cedar shall produce, at least one hundred forty (140) metric tons of Product to be produced by Cedar in a production campaign which will start in November 2001. For the avoidance of doubt, Cedar's manufacturing fee for production of such Product shall be \$8.00 per kilogram.
- (c) In the event Aventis shall not have ordered and purchased from Cedar pursuant to the Agreement, at least one hundred and twelve (112) metric tons of Product during 2002 and in each calendar year of the Initial Term thereafter, then Aventis shall pay an amount equal to \$8.00 multiplied by the difference between one hundred and twelve (112) metric tons and the amount of Product ordered and purchased, provided however, that any such amounts paid by Aventis will be credited as a prepayment for any Product to be delivered in the following calendar year of the Initial Term in excess of one hundred and twelve (112) metric tons.

If during 2002 or any calendar year of the Initial Term thereafter, Aventis orders and purchases an amount of Product which exceeds one hundred and twelve (112) metric tons, such excess shall be credited towards, and shall thereby reduce, Aventis' commitment in respect of the one hundred and twelve (112) metric tons of Product for the following calendar year of the Initial Term, provided that the credit will be limited to twenty-eight (28) metric tons.

- (d) The Product shall be packaged and labelled by Cedar in accordance with the Specifications.

5.4 Raw Material Usage

Maximum usage factors applicable to consumption of Raw Materials (expressed in kilograms of Raw Materials consumed per kilogram of Product) and Non-Strategic Raw Materials (expressed in kilograms of Non-Strategic Raw Materials consumed per kilogram of Product) shall be determined by mutual agreement of the Parties based on actual results achieved during the production campaign starting in November 2001. Thereafter, any over-consumption of Raw Materials or Non-Strategic Raw Materials (of more than 3.5%) shall be for Cedar's account. The savings on any under-consumption of Raw Materials or Non-Strategic Raw Materials of more than 3.5% shall be shared equally by the Parties.

Within thirty (30) days of the end of each campaign during the Initial Term and any extension of the Initial Term, Cedar will prepare and provide Aventis with a statement of consumption of Raw Materials and Non-Strategic Raw Materials, accompanied by documentation demonstrating Cedar's costs for such Non-Strategic Raw Materials. Upon receipt thereof, Aventis will provide Cedar with a statement of its cost for such Raw Materials. Within thirty (30) days of receipt of such statement from Aventis, the Party owing compensation to the other Party pursuant to this Article 5.4 will pay the other Party all amounts so due. The Parties may, by mutual agreement, decide that any such amounts will be taken into account in the next invoice for Product delivered to Aventis.

5.5 Wastes

Cedar shall be solely responsible for disposal of all wastes (including without limitation, solid, liquid and hazardous materials and wastes, as the same may be defined by the EPA and any regulations issued pursuant to laws regulating the environment) generated in connection with the manufacturing operations contemplated hereby, and agrees to comply with all applicable laws, rules and regulations pertaining to the generation, storage, transport and disposal of such wastes. Cedar agrees to minimize the generation of wastes associated with manufacturing of the Product and shall recycle, use or dispose of such wastes in approved off-site facilities as directed from time to time by Aventis. Failure by Cedar to handle wastes in accordance with these provisions shall be deemed to be a material breach of this Agreement. Aventis shall reimburse Cedar for off-site waste disposal, provided that the waste disposal charge to Aventis shall not exceed \$ 1.25 per kilogram of Product, provided that in the event new governmental regulations are promulgated which prohibit Cedar from disposing of manufacturing wastes in the same manner as during the calendar year 2000, the Parties shall make their best efforts to reach agreement on a revised cap for off-site waste disposal costs per kilogram of Product. Cedar shall be solely responsible for any liability resulting from the violation of any environmental law as a result of Cedar's performance hereunder, and shall indemnify Aventis against any claims against Aventis or its Affiliates by any Third Party, including any public authority, in respect of any such violation.

Article 6. CAPITAL IMPROVEMENTS

As set forth in Appendix 1, Cedar's cost of Capital Improvements is \$ 751 000. This cost will be amortized over the first seven hundred ninety (790) metric tons of Product to be produced by Cedar and paid for by Aventis during the Initial Term of the Agreement. Accordingly, \$ 0.95 for each kilogram of Product purchased by Aventis from Cedar hereunder shall be credited to Aventis' obligation to reimburse Cedar's cost of Capital Improvements. If Cedar has not been totally reimbursed for this agreed cost of the Capital Improvements upon expiration of the Initial Term on December 31, 2006, Aventis shall be responsible for reimbursing Cedar the balance of this agreed cost by December 31, 2006. If this Agreement is terminated for reasons other than for default by Cedar prior to the end of the Initial Term, the remaining portion of this agreed cost (to the extent incurred and unamortized) shall be paid in full by Aventis to Cedar upon the occurrence of such termination.

Article 7. TITLE AND RISK OF LOSS

Title to the Raw Materials supplied by Aventis to Cedar pursuant to this Agreement and to the Product manufactured by Cedar for Aventis pursuant to this Agreement shall at all times be in, and remain in, Aventis. Risk of loss, theft, degradation, substitution, contamination, destruction or damage of the Raw Materials, the Non-Strategic Raw Materials and the Product shall be borne by Cedar until delivered to Aventis as provided herein. Aventis shall bear the risk of loss, theft, degradation, substitution, contamination, destruction or damage to the Product after the Product is loaded onto the carrier designated by Aventis.

Article 8. CONFIDENTIALITY

- 8.1** Cedar shall keep secret and confidential all Process and Product information and other proprietary and technical information communicated in any form whatsoever by Aventis to Cedar from time to time in connection with this Agreement, and any information derived therefrom (collectively, the "Confidential Information"), and shall not disclose such Confidential Information, in whole or in part, to any Third Party. Cedar shall disclose the Confidential Information to its personnel on a strict need to know basis and shall not use the Confidential Information for any purpose other than the performance of the Agreement. This obligation of secrecy and non-use shall continue after the expiration or termination of this agreement for a period of 10 (ten) years.
- 8.2** The foregoing commitments shall not apply, however, to any part of such Confidential Information, which:
- (i) was known to the public or generally available to the public prior to the date of disclosure by Aventis,
 - (ii) becomes known to the public or generally available subsequently to the date of disclosure by Aventis through no act or failure to act on the part of Cedar or its Affiliates, or
 - (iii) Cedar can establish by adequate proof was received in good faith by Cedar from a Third Party having a bona fide right to disclose or make available such Confidential Information to Cedar.
- 8.3** The said Confidential Information shall not be deemed to be within one of the foregoing exceptions if it is merely embraced by more general information available in the public domain or in Cedar's possession. In addition, any combination of features shall not be deemed to be within the foregoing exceptions merely because the individual features are in the public domain or in Cedar's possession.
- 8.4** Cedar shall return promptly to Aventis, upon termination of the Agreement or upon Aventis' request, all of the Confidential Information and any documents, drawings, electronic media or other material containing or derived from the Confidential Information.

- 8.5** The contents of this Agreement may not be disclosed to any Third Party without the prior written consent of both Parties. Should a Party desire to make a communication to a Third Party or to the public regarding the transaction contemplated by the Agreement, such Party must first receive the prior written approval of the other Party.

Article 9. INDEMNIFICATION

9.1 Indemnification of Aventis.

Cedar shall defend, indemnify and hold harmless Aventis, its directors, officers, employees, agents and Affiliates, from and against all claims, actions, proceedings, demands and all liabilities, losses, damages, fines, penalties and expenses (including without limitation, reasonable attorney and consultant expenses) and all direct, special, indirect and consequential loss, damage or expense, whether or not made by a Third Party, which are caused by or arise out of, or in connection with (i) its manufacturing of the Product, including disposal of wastes therefrom; (ii) storing or handling of the Raw Materials or Non-Strategic Raw Materials or the Product; or (iii) the negligent or intentional acts or omissions or the breach of any warranty or agreement made herein or of this Agreement by Cedar, its employees, agents or Affiliates, except to the extent that such claims are caused by Aventis' negligence, fault, omission or conduct or Aventis' breach of any warranty made herein or of this Agreement.

9.2 Indemnification of Cedar.

Aventis shall defend, indemnify and hold harmless Cedar, its directors, officers, employees, agents and Affiliates, from and against all claims, actions, proceedings and demands and all liabilities, losses, damages, fines, penalties and expenses (including without limitation, reasonable attorney and consultant expenses) and all direct, special, indirect and consequential loss, damage or expense, whether or not made by a Third Party, which are caused by or arise out of, or in connection with (i) the transporting, storing, handling or use of Product after such Product has been delivered to Aventis, and (ii) the negligent or intentional acts or omissions or the breach of any warranty or agreement made herein or of this Agreement by Aventis, its employees, agents or Affiliates, except to the extent that such claims are caused by Cedar's negligence, fault, omission or conduct or Cedar's breach of any warranty made herein or of this Agreement.

Article 10. TERM AND TERMINATION

10.1 Term

The initial term of this Agreement (the "Initial Term") shall be from the Effective Date through December 31, 2006. Thereafter, the term of the Agreement shall be renewed for successive two year periods unless terminated by either Party upon notice to the other not less than one (1) year prior to the end of the Initial Term or one year prior to

the end of any extension of the Initial Term of Agreement; provided that this Agreement shall not be so extended unless, prior to the end of the Initial Term or of any extended term, the Parties will have negotiated and reached mutual agreement in respect of the terms of such extension (including the price and quantity).

10.2 Prior Termination

- (a) Either Party may terminate this Agreement before the expiration of the Initial Term or the extended term by written notice to the other Party if:
 - (i) the other Party goes into bankruptcy or insolvency; or
 - (ii) the other Party (including any of its Affiliates) commits a material breach of its obligations under this Agreement and fails, within one month from notice of such breach to remedy the same (if capable of remedy) or (if incapable of remedy) to pay adequate compensation therefor.
- (b) Aventis shall have the right to terminate this Agreement by written notice with immediate effect if Cedar or any of its Affiliates uses the Confidential Information for purposes other than those specified herein.
- (c) Aventis shall have the right to terminate this Agreement immediately, with no further liability thereafter, except as provided in Article 6 of this Agreement, in the event that it decides to withdraw the Product from the market or if Aventis' business relating to the Product is sold or transferred to a Third Party.
- (d) This Agreement shall be terminated automatically with no further liability thereafter, except as provided in Article 6 of this Agreement, if following the production campaign starting in November 2001, Cedar proposes to Aventis a new manufacturing fee for production of Product for Aventis pursuant to Article 5.2(b) above and Aventis decides not to accept such new manufacturing fee.

10.3 Non-exclusive Remedy

The right of a Party to terminate this Agreement in the event of a breach hereof by the other shall not be an exclusive remedy for such breach, and such Party shall be entitled, in addition, to any damages or remedy available under applicable law.

10.4 Accrued Obligations

Neither the expiration nor any termination of this Agreement for whatever cause shall affect the rights or obligations of either Party which have accrued as of the date of such expiration or termination, nor shall it affect any rights or obligations of either Party under this Agreement which are intended by the Parties to survive such expiration or termination.

Article 11. CONSEQUENCES OF TERMINATION

- 11.1** In the event of termination or expiration of this Agreement for any reason whatsoever, without prejudice to any legal or equitable rights or remedies of either Party, the following actions shall be taken:
- (a) Cedar shall immediately interrupt the manufacture of the Product and immediately return to Aventis the Confidential Information and all information relating to the Process and any other data or information it shall have received from Aventis during the term of this Agreement relating to the Product, or which is derived therefrom, and Cedar shall make no further use thereof without the written consent of Aventis.
 - (b) The Parties shall continue to observe the provisions of Articles 4.3, 5.4, 8, 9, 11 and 13 hereto, which shall remain in full force and effect.
 - (c) Aventis shall have the option, in its sole discretion, to purchase from Cedar, at the then applicable manufacturing fee, any inventory of Product in usable or merchantable condition.
 - (d) Upon termination or expiration of this Agreement, Cedar will have no right to any compensation for cleaning or decontamination of its installations used to produce Product hereunder. Upon reasonable notice, Aventis shall have the right to have its representatives audit such cleaning or decontamination. The presence of any such representatives shall not relieve Cedar from any liability, duties or obligations in respect thereof.

Article 12. FORCE MAJEURE

- 12.1** Neither Party shall be liable for its delay in performing or failure to perform hereunder as a result of any contingency beyond its reasonable control, including but not limited to acts of God, fires, floods, wars, civil insurrection, sabotage, accidents, lockouts, labour disputes or shortages, any governmental laws, ordinances, rules, regulations, bans, action or inaction (such contingency herein referred to as a "Force Majeure").
- 12.2** The Party pleading circumstances of Force Majeure shall notify the other Party of the existence of such delay immediately and shall also notify the other Party as soon as the circumstances giving rise to such Force Majeure have abated. The Parties' obligations hereunder shall be suspended for the duration of any Force Majeure and shall resume upon termination of the Force Majeure, in accordance with the terms of this Agreement.

Article 13. ARBITRATION; APPLICABLE LAW

13.1 Method and Location

All disputes arising in connection with the present Agreement shall be finally settled under the rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules. The arbitration shall be conducted in the English language in New York City.

13.2 Applicable Law

This Agreement shall be construed in accordance with and governed by the laws of the State of New York.

Article 14. IMPROVEMENTS

14.1 The Parties hereby agree that nothing contained herein shall be construed as granting any right to Cedar relating to the Process and Product information or any other proprietary and technical information communicated by Aventis to Cedar other than for Cedar to manufacture Product for Aventis in accordance with the terms and conditions hereof.

14.2 Cedar shall immediately notify Aventis of any know-how, improvement or patentable discovery resulting from Cedar's performance under this Agreement. Any such know-how, improvement or patentable discovery shall be the exclusive property of Aventis, which may file for patent protection thereon in its own name and at its own cost. Cedar hereby assigns its rights on such know-how, improvements or patentable discoveries to Aventis and will cause its employees to do the same if necessary. At the request and expense of Aventis, Cedar will provide any assistance and information required by Aventis to file any such patent application.

Article 15. REGULATORY COMPLIANCE, PRODUCT INFORMATION

15.1 Cedar shall manufacture Product for and on behalf of Aventis in accordance with all applicable laws and regulations, including all applicable health, safety and environmental laws and regulations, and shall keep such records as may be required thereunder. Cedar acknowledges that it has inspected and tested the Process and affirms that it has all technical expertise necessary to: (i) install and operate the equipment described in the Process in a safe and sound manner; and (ii) use the Process to produce Product without causing damage to persons, equipment or the environment.

15.2 Cedar represents and warrants to Aventis that it has obtained all permits, authorizations and licenses necessary for its performance of the operations contemplated herein and the use of the Plant as contemplated hereby, and hereby agrees to comply with all provisions thereof and to maintain and obtain all renewals, reapplications and modifications of all permits, authorizations and licenses necessary or required for such operations.

15.3 Cedar shall ensure that its procedures and means meet appropriate regulatory requirements governing the handling, stocking, labeling and transport of Raw Materials, Non-Strategic Raw Materials and Product and shall observe any recommendations and instructions that Aventis shall communicate to Cedar in respect of the safe manufacture of the Product, handling and use of the Product and the Raw Materials and Non-Strategic Raw Materials, as well as health and protection of the environment.

Article 16. EXCLUSION OF AGENCY, RELATIONSHIP OF THE PARTIES

Each Party hereunder is an independent contractor and neither Party is authorized or empowered to act as agent for the other Party for any purpose, and shall not on behalf of the other Party enter into any contract, undertaking or agreement of any sort or make any promise, warranty or representation.

Article 17. ASSIGNMENT

Neither Party may transfer or assign this Agreement to any Third Party without the prior written consent of the other Party.

Article 18. HEADINGS

The headings to the clauses of this Agreement are for the convenience of reference only, do not form part of this Agreement and shall not in any way affect the construction hereof.

Article 19. NOTICES

19.1 All notices or communications required or permitted to be given under this Agreement shall be in writing in English and shall be valid and sufficient if dispatched by personal delivery, by registered airmail, return receipt requested, or facsimile transmission, and shall be deemed to have been given or made when personally delivered, or when received as evidenced by return receipt or confirmation of facsimile transmission, and addressed to the respective addresses as first indicated herein, for the attention of their respective legal departments.

19.2 Any Party may change its address by a notice given to the other Party in the manner set forth above. Notices given as herein provided shall be considered to have been given fourteen (14) days after the mailing thereof.

Article 20. AMENDMENTS; WAIVERS

No amendment of this Agreement or any provisions or terms thereof shall be binding unless recorded in a written document signed by both Parties. No delay, waiver, omission, or forbearance on the part of a Party to exercise any right, option, duty, or power arising out of any breach or default by the other Party under any of the terms, provisions, covenants, or conditions hereof, shall constitute a waiver by such Party to enforce any such right, option, duty, or power as against the other Party, or operate as a waiver of any subsequent breach or default by the other Party.

Article 21. ENTIRE AGREEMENT; SURVIVAL

This Agreement, including the Appendices hereto, sets forth the entire understanding and agreement between the Parties with respect to the subject matter hereof, and cancels and supersedes all previous agreements, promises, representations and understandings, written or oral, between the Parties with respect to the subject matter hereof, including the MOU.

Article 22. SEVERABILITY

If any provision(s) of this Agreement shall, to any extent, be held to be invalid, illegal or unenforceable in any given jurisdiction, or any governmental agency or authority shall require the Parties to delete any provision of this Agreement as a condition of validity, legality or enforceability of the remainder of this Agreement in any given jurisdiction, such invalidity, illegality, unenforceability or deletion shall not impair or affect the remaining provisions of this Agreement or the validity or enforceability of such provision in any other jurisdiction. The Parties shall endeavor through good faith negotiations to replace the invalid, illegal, unenforceable or deleted provision by valid provisions the economic effect of which comes as close as legally possible to that of the invalid, illegal, unenforceable or deleted provision.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their duly authorised representatives on the day and year set forth below.

**Aventis CropScience Matières
Actives**

Cedar Chemical Corporation

By: Welter
Name: WOLFGANG WELTER
Title: Dr., HEAD OF MANUFACTURING
AND EHS
Date: 22.02.2002

By: _____
Name: _____
Title: _____
Date: _____

- Appendix 1 **Capital Improvements**
- Appendix 2 **Raw Material Specifications**
- Appendix 3 **Product Specifications**
- Appendix 4 **Escalation Formula**

Appendix 1 Capital Improvements

Cost Estimate Summary : Cyclanilide Campaign

	Labor	Material	Total
• 1.0 Site work			
Subtotal	\$ 8 400,00	\$ 1 000,00	\$ 9 400,00
• 2.0 Civil			
Subtotal	\$ 23 275,00	\$ 11 500,00	\$ 34 775,00
• 3.0 Reactors (Coiled/ Jacketed)			
Subtotal	\$ 25 550,00	\$ 27 600,00	\$ 53 150,00
• 4.0 Vessels/Tanks			
Subtotal	\$ 5 600,00	\$ 10 000,00	\$ 15 600,00
• 5.0 Heat exchangers			
Subtotal	\$ 1 750,00	\$ 18 000,00	\$ 19 750,00
• 6.0 Rotating Equipment			
Subtotal	\$ 6 300,00	\$ 31 000,00	\$ 37 300,00
• 7.0 Filtering Equipment			
Subtotal	\$ 700,00	\$ 6 000,00	\$ 6 700,00
• 8.0 Piping			
Subtotal	\$ 107 940,00	\$ 91 917,50	\$ 199 857,50
• 9.0 Electric/ Instrumentation			

	Labor	Material	Total
Subtotal	\$ 104 860,00	\$ 158 750,00	\$ 263 610,00
• 10.0 Inspection/ Engineering			
Subtotal	\$ 35 000,00	\$ 0,00	\$ 35 000,00
• 11.0 Rentals & 12.0 Miscellaneous			
Subtotal	\$ 840,00	\$ 6 500,00	\$ 7 340,00
SUBTOTAL	\$ 320 215,00	\$ 362 267,50	\$ 682 482,50
Contingency (10 %)	\$ 32 021,50	\$ 36 226,75	\$ 68 248,25
TOTAL	\$ 352 236,50	\$ 398 494,25	\$ 751 000,00

Appendix 2

Raw Material Specifications

a) 2,4 Di Chloraniline Specifications (For Cyclanilide)

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications (g/Kg)	Frequency
• Appearance	Visual	Molten product colourless to brown	each batch
• Solidification point		60° C min.	each batch
• Purity	Gas chromatography	990 min.	each batch
• Water	Karl Fischer	1 max.	each batch
Process Impurities			
- 2,5 Di chloraniline	Gas chrom.	2 max.	each batch
- 2,6 Di chloraniline	Gas chrom.	1 max.	each batch
- 3,4 Di chloraniline	Gas chrom.	1 max.	each batch
- Others impurities (sum)	Gas chrom.	3 max. (1 max for each)	each batch
- Chlorides		100 ppm max.	

2. PACKAGING

- Steel drum for liquid product.

b) CDM Specifications

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications
• Purity	GC / MS	min. 97,50 %
• Dimethylmalonate	GC / MS	max. 1,00 %
• Dimethylformamide	GC / MS	max. 0,75 %

c) Sodium Methylate Specifications Solution 30 % in Methanol

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications
• Total alkalinity calculated as : NaOCH ₃	Titration	29,5 % - 31,0 % 29,5 % - 30,5 %
NaOCH ₃ content	Titration	Max 0,5 %
• Na ₂ CO ₃ + NaOH content	ISO 6271	Max 30 APHA
• Color		

Appendix 3 Product Specifications

Cyclanilide Specifications

1. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis	Specifications (g/Kg)	Frequency
• Appearance	Visual	White to yellowish flowing powder	each batch
• CYCLANILIDE content	C.817.06.95	960 min.	each batch
• Water	CIPAC MT 30.1	5 max.	each batch
• Total alkyl aromatics : as o, p, m xylène, and ethyl benzene	C.816.06.95	1 max.	each batch
Process Impurities :			
- RPA 116741 (imp.A)	C.821.07.95	3 max.	each batch
- 2,4 Dichloroaniline	C.821.07.95	1 max.	each batch
- RPA 090 945	C.821.07.95	10 max.	each batch
- RPA 111 030	C.821.07.95	10 max.	each batch
- RPA 114 924	C.821.07.95	15 max.	each batch
- RPA 093 903	C.821.07.95	1 max.	each batch
- RPA 090 899	C.821.07.95	1 max.	each batch

Cross contamination prevention :

All possible impurities from the implementation of an other production in the equipment involved in manufacturing of Cyclanilide, must be identified and quantified.

2. PACKAGING

- Polyéthylène drums : 120 l.
- Net weight : 50 Kg of Cyclanilide

Appendix 4 Escalation Formula

Application commencing in 2003

$$P_{n+1} = P_n \left[0,15 + 0,425 \frac{W_{n+1}}{W_n} + 0,425 \frac{PPI_{n+1}}{PPI_n} \right]$$

- P_{n+1} = Adjusted toll fee for the contract year in \$ / Kg of Cyclanilide.
- P_n = Toll fee of the previous contract year in \$ / Kg of Cyclanilide.
- W_{n+1} = Employment Cost Index published by the US Bureau of Labor Statistic available the month of December preceding the date of adjustment.
- W_n = Employment Cost Index of the previous contract year.
- PPI_{n+1} = Producer Price Index, for the available month of December preceding the date of adjustment :
 - Industry and Product : Industrial Organic Chemical, Code 286.
 - Subcategory : Agricultural Chemical, nbc, other pesticidal preparations primarily for agricultural, Code 2879 – 8.
- PPI_n = Producer Price Index of the previous contract year.

RAW MATERIAL RECEIVING RECORD No. 20236

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0700

RECEIVED BY

S. White

SECTION 1

DATE ORDER NO. CAR OF TRUCK NO. DECLARED WEIGHT

4-29-08 6601405 760 / 6006 Net NA

SHIPPER

Tian Carrier

CARRIER

Trans Carrier

QUANTITY CONTAINER DESTINATION RAW MAT CODE # DESCRIPTION

480 Box Unit 7 NA Cyclanilide drums

COMMENTS

SECTION 2

RECIPIENT TIME SAMPLE / CERTIFICATE TAKEN TO LAB

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

PLANT WEIGHT

UNLOADING TIMES

NET

START TIME

END TIME

COMMENTS

PACKING SLIP

FROM:



Russell-Stanley

An Industrial Container Supply Chain Management Company

PAGE

192562

AT: 356 W. 19th St., Reserve, LA 70084
(504) 636-4200

BILL OF LADING #

239044

04/24/02

TRANS CAR

6006

THIRD PARTY

SHIP TO:

102228 0000
AVENTIS CROP SCIENCE/CEDAR

49 PHILLIPS ROAD # 311
HELENA, AR 72342
CEDAR CHEMICAL CORPORATION

US

239044

661405

C.O.D. \$

AND REMIT TO:
356 W. 19th St.
Reserve, LA 70084

480

03004E0UDX

POLYDRUM 30G DELEX OPEN EURO
BLU

SHIP EXACT COUNT OF 480 DRUMS.
SHIP VIA TRANS CARRIERS. BILL THIRD PARTY FREIGHT.
TO: AVENTIS CROPSCIENCE USA LP
PO BOX 13985, RESEARCH TRIANGLE PARK, NC 27709

SEAL# 0051184

5280 .000

If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is carrier's or shipper's weight.
NOTE: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Carrier is responsible to notify Russell-Stanley immediately of any alteration of this document to (504) 636-4200 to the Traffic Mgr.

CERTIFICATE OF CONFORMANCE

This certifies that all Non-removable head (UN 1H1, UN 1A1 and 3H1) and Removable head (UN 1H2 and 1A2) drums, manufactured by RUSSELL-STANLEY CORP. in accordance with the standards set forth in Part 178 Subpart L - Non-bulk Performance Oriented Packaging Standards - of Title 49 Code of Federal Regulations-Transportation (current edition) and subsequent revisions appearing in the Federal Register during current calendar year have been successfully qualification tested for their respective design types in accordance with the requirements for packaging given in Part 178 Subpart M - Testing of Non-bulk Packagings and Packages - Title 49 CFR and when prepared for shipment using the closures supplied and / or specified and closed as instructed by RUSSELL-STANLEY CORP. are capable of meeting the performance standards indicated by the drum markings applied in accordance with 49 CFR § 178.693. Furthermore, the marking on the drum is certification of this capability as stated in § 178.2 (b), 49 CFR.

Subject to Section 7 of conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the Consignor, the Consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor)
If charges are to be prepaid, write or stamp here, "To be Prepaid."

Received \$ to

apply in prepayment of the charges on the property described herein.

Agent or Cashier

Per
(The signature here acknowledges only the amount prepaid.)

Charges Advanced \$

Shipper's imprint in lieu of stamp; not a part of bill of lading approved by the Interstate Commerce Commission.

The Fibre Boxes used for this shipment conform to the specifications set forth in the box maker's certificate thereon, and all other requirements of Rule 41 of the Consolidated Freight Classification.

Signed Russell-Stanley Bill of Lading Required For Process of Payment For Carrier.

☐ Plastic Container OTE 156.600 sub#

☐ New Steel Drums 55 Gallon Empty. Gauge

Customer Arrival Time

Departure Time

Customer Signature:

Date:


Russell-Stanley SHIPPER PER

Agent, Per

Permanent Address of Shipper: 356 W. 19th St., Reserve, LA 70084

AB0000012175

CONSIGNEE DELIVERY RECEIPT

Freight Bill # 202307031 RO TNBR#: Date: 05/23/2002		CONSIGNEE AVENTIS CROP SCIENCE/CEDAR 49 PHILLIPS ROAD #311 CEDAR CHEMICAL CORPORATIO HELENA AR 72342		SHIPPER RUSSELL STANLEY CORP 356 W 19TH ST RESERVE LA 70084				
H/U	PCS	RM	DESCRIPTION	WORKS	NMPL	POI CLASS	RATE	CHARGES
	110		PO# 659672 POLYDRUM 30G DELEX 002479 FUEL SURCHG LTL SHPT 060CLASSIFICATION CHANGE SHIPMENT OCCUPIED 815 CUBIC FT. DENSITY 1.5 LBS PER CUBIC FT. CUBIC CAPACITY MIN. CHG. APPLIED PER AF RULES TARIFF 125 ITEM 613 SRL INSPECTING TERMINAL 00815 CUBIC FEET APPOINTMENT FROM 09:00 TO 15:00 APPT052802 15:00SETUP052402 12:46 (000)000-0000	1210	156600-02		300	
110	110		PREPAID - WILL INVOICE THIRD PARTY	1210				
ANY ADDITIONAL SERVICES MAY RESULT IN ADDITIONAL CHARGES* CHARGES SUBJECT TO CHANGE*				B/L # 247721 P.O. # 659672		0.00		
Received by: Date: 5/28/08 Delv. Driver: 68 <input type="checkbox"/> DELV WITH S/W INTACT <input type="checkbox"/> CLEAR <input type="checkbox"/> SHORT <input type="checkbox"/> OVER <input type="checkbox"/> DAMAGE EXCEPTIONS:				Depart: Driver #: 19831  A FedEx Company P.O. Box 840, Harrison, AR 72602-0840 (ARFW) Phone: 800-447-8139		Page 1 of 1		

STRAIGHT BILL OF LADING - SHORT FORM - ORIGINAL - NOT NEGGTIALE

RECEIVED, subject to the classifications and freight filed tariffs in effect on the date of the issue of this Bill of Lading.FROM: **Russell-Stanley**

An Industrial Container Supply Chain Management Company

PAGE 1

AT: 356 W. 19th St., Reserve, LA 70084
(504) 536-4200

BILL OF LADING #

247721

TICKET DATE	SHIPPED VIA	TRAILER #	DRIVER	CARRIER	SHIP TO
05/28/02	AM FREIGHTWAY	111507	D.		THIRD PARTY

SHIP TO:

10200 0000
AVENTIS CROP SCIENCE/CEDAR49 PHILLIPS ROAD # 311
HELENA AR 72342
CEDAR CHEMICAL CORPORATION

US

R.S. ORDER #	CUSTOMER P.O. #	C.O.D. \$	AND REMIT TO:
247721	61 9672		356 W. 19th St. Reserve, LA 70084

QUANTITY SHIPPED	PART NUMBER	DESCRIPTION	WEIGHT
110	030041000	POLYDRUM 30G DELEX OPEN EURO BLU SHIP EXACT COUNT OF 110 DRUMS. BILL THIRD PARTY FREIGHT: TO: AVENTIS CROPS SCIENCE USA LP PO BOX 13985, RESEARCH TRIANGLE PARK, NC 27709	1-10.000
110		SEAL#	.000

*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is carrier's or shipper's weight.
NOTE: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding per

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Carrier is responsible to notify Russell-Stanley immediately of any alteration of this document to 504-536-4200 to the Traffic Mgr

CERTIFICATE OF CONFORMANCE

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Signed Russell-Stanley Bill of Lading Required For Process of Payment For Carrier.

☐ Plastic Container OTE 156.600 sub#

☐ New Steel Drums 55 Gallon Empty. Gauge

Customer Arrival Time _____ Departure Time _____

Customer Signature: *[Signature]* Date: _____Russell-Stanley SHIPPER PER *[Signature]* Agent, Per _____

Permanent Address of Shipper: 356 W. 19th St., Reserve, LA 70084

Subject to Section 7 of conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse to the Consignor, the Consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other landed charges.

[Signature]
(Signature of Consignor)

If charges are to be prepaid, write or stamp here, "To be Prepaid."

Received \$ _____ to _____

apply in prepayment of the charges on the property described hereon.

Agent or Cashier

Per _____
(The signature here acknowledges only the amount prepaid.)


Charges Advanced \$ _____

† Shipper's imprint in lieu of stamp; not a part of bill of lading approved by the Interstate Commerce Commission.

The Fibre Boxes used for this shipment conform to the specifications set forth in the box maker's certificate thereon, and all other requirements of Rule 41 of the Consolidated Freight Classification.

AB0000012040

CONSIGNEE DELIVERY RECEIPT

Freight Bill # 202307031 R0 TNBR#:		CONSIGNEE AVENTIS CROP SCIENCE/CEDAR 49 PHILLIPS ROAD #311 CEDAR CHEMICAL CORPORATIO HELENA AR 72342		SHIPPER RUSSELL STANLEY CORP 356 W 19TH ST RESERVE LA 70084				
Date: 05/23/2002								
H/U:	PCS	HM	DESCRIPTION	WT/LBS	INFO	PCF CLASS	RATE	CHARGES
	110		PO# 659672 POLYDRUM 30G DELEX 002479 FUEL SURCHG LTL SHPT 060CLASSIFICATION CHANGE SHIPMENT OCCUPIED 815 CUBIC FT. DENSITY 1.5 LBS PER CUBIC FT. CUBIC CAPACITY MIN. CHG. APPLIED PER AF RULES TARIFF 125 ITEM 613 SRL INSPECTING TERMINAL 00815 CUBIC FEET APPOINTMENT FROM 09:00 TO 15:00 APPT052802 15:00SETUP052402 12:46 (000) 000-0000	1210	156600-02		300	
110	110	PREPAID - WILL INVOICE THIRD PARTY		1210				
ANY ADDITIONAL SERVICES MAY RESULT IN ADDITIONAL CHARGES CHARGES SUBJECT TO CHANGE				B/L # 247721		0.00		
Received by: Date: 5/28/02 Arrive: 11/11 Depart: Delv. Driver: 68 Driver #: 19871 <input type="checkbox"/> DELV WITH S/W INTACT # of Skids Delv <input checked="" type="checkbox"/> CLEAR <input type="checkbox"/> SHORT <input type="checkbox"/> OVER <input type="checkbox"/> DAMAGE EXCEPTIONS:				P.O. # 659672				
				 A FedEx Company P.O. Box 840, Harrison, AR 72602-0840 (ARFW) Phone: 800-447-8139 Page 1 of 1				

STRAIGHT BILL OF LADING - SHORT FORM - ORIGINAL - NOT NEGOTIABLE

RECEIVED, subject to the classification and liability for loss or damage in effect on the date of the issue of this Bill of Lading

PAGE 1

BILL OF LADING #

247721

FROM:

**Russell-Stanley**

An Industrial Container Supply Chain Management Company

AT: 356 W. 19th St., Reserve, LA 70084
(504) 536-4200

SET DATE	SHIPPED VIA	TRAILER #	DRIVER	REMARKS	TO
05/28/02	AM FREIGHTWAY	111-07			THIRD PARTY

SHIP TO:

102... 0000
AVENTIS CROP SCIENCE CEDAR
49 PHILLIPS ROAD # 511
HELENA AR 72342 US
CEDAR CHEMICAL CORPORATION

R.S. ORDER #	CUSTOMER P.O. #	C.O.D. \$	AND REMIT TO:
247721	619672		356 W. 19th St. Reserve, LA 70084

QUANTITY SHIPPED	PART NUMBER	DESCRIPTION	AMOUNT
110	03004101	POLYDRUM 30G DELEX OPEN EURO BLU SHIP EXACT COUNT OF 110 DRUMS. BILL THIRD PARTY FREIGHT: TO: AVENTIS CROPS SCIENCE USA LP PO BOX 13985, RESEARCH TRIANGLE PARK, NC 27709	110.000
110		SEAL#	.000

If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is carrier's or shipper's weight.
NOTE: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

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Signed Russell-Stanley Bill of Lading Required For Process of Payment For Carrier.

☐ Plastic Container OTE 156.600 sub#

☐ New Steel Drums 55 Gallon Empty, Gauge

Customer Arrival Time

Departure Time

Customer Signature: *[Signature]* Date: *[Date]*Russell-Stanley SHIPPER PER *[Signature]*

Agent, Per

Permanent Address of Shipper: 356 W. 19th St., Reserve, LA 70084

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[Signature]
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Received \$ to

apply in prepayment of the charges on the property described hereon.

Agent or Cashier

Per

(The signature here acknowledges only the amount prepaid.)

Charges

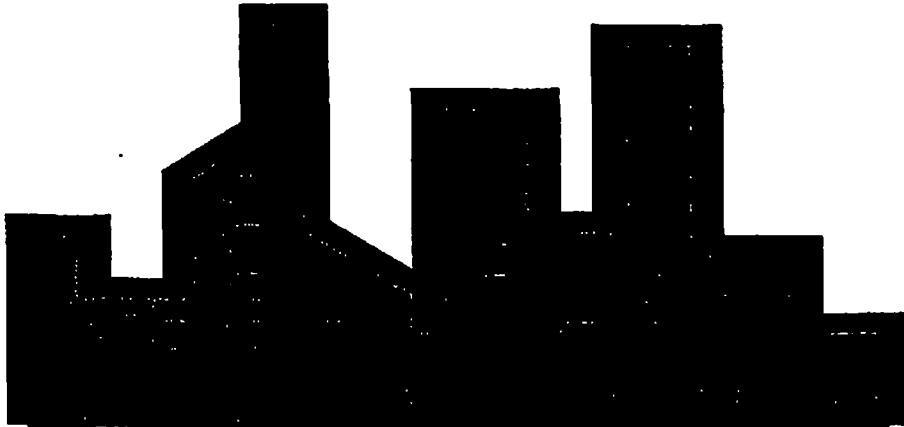
Advanced \$

† Shipper's Imprint in lieu of stamp; not a part of bill of lading approved by the Interstate Commerce Commission.

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AB0000012040

**ARKANSAS DELTA BIODIESEL
RESEARCH PROJECT**



BIOMASS RESEARCH AND DEVELOPMENT INITIATIVE

031803-001

BY

COMBUSTION TECHNOLOGIES, LLC

HELENA- WEST HELENA/PHILLIPS COUNTY PORT AUTHORITY

LURGI, PSI

ARKANSAS DEPARTMENT OF ECONOMIC DEVELOPMENT

DELTA REGIONAL ENERGY DEVELOPMENT GROUP, INC.

UNIVERSITY OF ARKANSAS DIVISION OF AGRICULTURE

May 15, 2003

TECHNICAL SUMMARY

Combustion Technologies, LLC, Helena-West Helena/Phillips County Port Authority, Lurgi, PSI, Delta Regional Energy Development Group, Inc., Arkansas Department of Economic Development, and the University of Arkansas Division of Agriculture (Applicant) proposes to study the feasibility of providing the economically distressed Eastern Arkansas Mississippi River Delta region with a facility capable of producing up to 30 million gallons of biodiesel annually.

The Applicant will explore:

- 1) The probability that the addition of fuel catalyst, Dipetane, to biodiesel results in a substantial reduction of Nitrous Oxide (NOx)
- 2) Using biodiesel as a carrier oil to replace fossil fuel based products
- 3) Genetically engineering oilseed crop-based biodiesel and examining its environmental performance versus traditional biodiesel when both have the catalyst Dipetane; and
- 4) Creating a prototype facility for retrofitting existing abandoned facilities (brownfield conversions) for the production of biodiesel.

With the requested grant funds the Applicant will conduct a variety of research and activities aimed at completing a biodiesel facility project and providing a fuel which will answer the NOx problem facing the end-users of biodiesel worldwide. Activities will include:

- ❖ Retaining an independent research institute to test product blends on the reduction of NOx by blending the proven fuel catalyst, Dipetane, with biodiesel, and to examine the possibility of using biodiesel as a carrier oil.
- ❖ Conducting an engineering study to assess the benefits of retrofitting an existing, abandoned facility versus building a new facility for the production of biodiesel.
- ❖ Performing a market analysis encompassing all areas pertaining to the sale of biodiesel and its byproducts, including present and future demand and national and international markets.
- ❖ Reviewing federal policy, legislation, benefits, incentives, contracts, permits and all legal issues and funding opportunities pertaining to the use and production of biodiesel.
- ❖ Forming a Farmer's Cooperative to create and operate a grain storage terminal and soybean oil extrusion plant, and to develop an oilseed experimental farm to explore alternative genetically-engineered crop opportunities for biodiesel production.

The planned research and activities will provide the Applicant with the information necessary to successfully complete this innovative biodiesel production project. The facility represents significant advances in rural based biodiesel production, handling, processing and manufacturing, and will double the present biodiesel production in the United States. The economy of Arkansas and specifically its Eastern Delta region- one of the poorest rural areas in the United States- will be greatly enhanced. The facility will create approximately 200 new jobs as well as significant opportunities for farmers to add value to their oilseed crops.

The use of Arkansas' abundant soybean crops- ranked 9th nationally- and its other renewable resources will help avoid the depletion of natural resources while also furthering national environmental objectives. The use of biodiesel blended with the fuel catalyst, Dipetane, will answer pressing environmental concerns raised by the EPA, will reduce greenhouse gases, create a healthier environment, and improve strategic energy security and trade balances.

OBJECTIVES: To provide one of the most impoverished areas of the United States with a biodiesel facility which will improve the economy and environment of the Mississippi River Delta, as well as, the entire Southern part of the United States. To make available a product developed to eliminate the most pressing negative issue facing biodiesel in America, NOx. The biodiesel facility will make feasible the construction, by a farmer's cooperative, of a soybean extrusion plant and grain storage terminal.

PROJECT DESCRIPTION

Since 1999, Arkansas-based Combustion Technologies has been working extensively with end-users of hydrocarbon fuels in the transportation industry. In conjunction with Combustion Technologies West (located in southern California) the company has become involved with extensive research into alternative fuel sources, most specifically biodiesel. Combustion Technologies has become acutely aware of the benefits of biodiesel and desires to help provide answers for an alternative fuel and the growing environmental pollution problems in our nation.

Biodiesel is becoming one of the fastest growing alternative fuels in the United States and interest is growing within Arkansas. This tremendous interest from consumers, government and industry, has brought a group of interested parties from all areas of expertise to the forefront to help in bringing this industry to Arkansas. John and Cynthia Haley, principals in Combustion Technologies, have championed this effort.

John's lifelong residence in Arkansas and his business and community activities in and around Arkansas' Delta communities have exposed him to the many challenges that face that region, one of the poorest in the nation. His commitment to improving the environment and his concern for the welfare of his fellow citizens came together one afternoon as he traveled through the Delta. He realized that many of the pieces of the puzzle for improving the Delta were already in place. Combustion Technologies knows how to produce biodiesel. Arkansas ranks 9th in soybean production nationwide, a key component of biodiesel production.

Recent consolidation of the soybean processing industry has left few options for farmers in Arkansas and the Mississippi River Delta. There are only two processors in Arkansas, Riceland Foods in Stuttgart and Archer Daniels Midland in Little Rock, leaving Arkansas farmers few options. They face high freight costs to processing locations and river load-out facilities and have become subject to extremely low prices during the harvesting season.

A feasibility study was done in 2001-2002 by Winrock International (Alexandria, VA) to ascertain the profitability of a grain storage terminal for this Eastern Arkansas Mississippi River Delta region. The findings were discouraging as to the future profitability of the terminal. However, the study showed soybean oil extrusion to be a viable value-added business. This study led the farmers of the Delta Region to look at the possibility of building a grain storage terminal and soybean oil extrusion plant in the same area as the proposed biodiesel facility. As a unified team, a farmers' cooperative can impact the production, quality and availability of soybean production. Thus formed the Farmers' Blenders Cooperative, a group of farmers in the Eastern Arkansas Mississippi River Delta who are committed to the development of and future opportunities for local farmers.

The farmers' cooperative recognizes the market availability and desire to create opportunity and byproducts for an already abundant soybean harvest. The cooperative, with the help of the Delta Regional Development Group, a non-profit community development corporation committed to the economic and educational viability of the Delta region, is committed to begin the work necessary to accomplish this \$10 million project. The cooperative seeks to capitalize on the volume of its harvest and the need for a grain storage terminal to house the significant crop harvests it markets, supplying soybean oil to the biodiesel facility, as well as producing expeller pressed soybean meal, with significant nutritional advantages for feeding certain livestock and fish. Farmers will again have access to better markets through this cooperative effort and the local economy will be stimulated by the approximately 200 new jobs provided by the biodiesel and soybean oil extrusion plants.

In addition to soybean harvesting, the cooperative will establish an experimental oilseed farm of at least one hundred acres to grow additional oilseed crops for analysis as blends for biodiesel. The potential for creating and examining a variety of genetically engineered oilseed crops to blend with biodiesel is significant.

A new biodiesel production facility will be established to process the soybean and other oilseed crop harvest, creating a clean, environmentally friendly fuel with the fuel catalyst Dipetane. Dipetane, a pure hydrocarbon fuel catalyst, is blended at a 1:200 ratio with all liquid hydrocarbon fuels. It has been tested extensively over the past 15 years and has proven to be successful in acting as a catalyst on the hydrocarbon chains in the fuel so that more of the energy is available upon burning. Unlike detergent additives which wash away unburned deposits, Dipetane treatment allows the asphaltines in the fuel to be fully oxidized thus giving an enhanced energy release. Because Dipetane burns more of the fuel, soot and carbon deposits are eliminated. Dipetane treated fuel burns at lower temperature reducing NOx and SOx emissions. It can be added into either the vehicle fuel tank or bulk storage tank and mechanical mixing is not required. Analysis carried out by the Irish Scientific Research Agency show Dipetane to create no extra wear on an metal, rubber, or plastic engine components.

Dipetane is registered with the Environmental Protection Agency (EPA). Gas Technology Services, an approved Australian Gas Association testing laboratory, tested Dipetane treated diesel fuel from April 2000 to November 2000 to assess the capabilities of Dipetane to reduce both fuel consumption and emissions. The following results with the following results:

STAGE 1 – Sampling and on-line analysis of exhaust gases – prior to the addition of Dipetane
STAGE 2 – Sampling and on-line analysis of exhaust gases – after the addition and ongoing use of Dipetane for 8 months.

The fully detailed independent findings from this study show a significant reduction in emissions between Stage 1 and Stage 2. Testing was completed at 0 RPM (idle) and 2000 RPM. The results are summarized as follows:

Emission Type	Maximum % Reduction Achieved
Carbon Dioxide - CO ₂	23%
Carbon Monoxide - CO	9.50%

Nitrogen Oxides - NOx	35.40%
Sulphur Oxides - SOx	26.80%
Smoke Density - Opacity	61.50%

The planned biodiesel production facility will be established by purchasing an existing abandoned facility to retrofit for biodiesel production or constructing a new facility in the Eastern Arkansas Mississippi River Delta region, most probably Phillips County. The facility will have the capacity to produce up to 30 million gallons of biodiesel per year, doubling the current annual production of such fuel in the United States. With guidance and assistance from the Arkansas Department of Environmental Quality and the Arkansas Department of Economic Development, two separate facilities have already been identified as potential retrofit candidates.

Since 1993, under the Arkansas Brownfields Program, Arkansas Code 8-7 Subchapter 11, the EPA has provided over \$250 million in Brownfields funding for cleanup and economic redevelopment of similar sites. Redevelopment of such a facility will not only serve to prevent further environmental damage to the site but pump economic life back into this distressed area. An engineering study for the retrofitting of an existing abandoned plant will be conducted to determine the feasibility of accomplishing such a project. The outcomes of this study will not only serve as a guide for fulfillment, but will also have implications for similar locations nationwide.

In preparation for taking the facility online, marketing research will be conducted in conjunction with other biodiesel manufacturers and agricultural engineers nationwide, leading to the composition of a marketing plan written to encompass not only the sale of biodiesel but the sale of all byproducts produced during the manufacturing process. All available information on current legislation, governmental incentives, benefits, contracts, permits, legal issues and funding opportunities pertaining to the production of biodiesel will be researched. Industry accepted practices related to site acquisition, machinery equipment specification and sourcing, storage and handling equipment, and laboratory equipment and supplies will be determined and evaluated throughout this process.

RELEVANCE TO FUNDING PRIORITIES

Arkansas is a prime location for the construction of a biodiesel facility, with all of the necessary components readily available. The feasibility of producing biodiesel in Arkansas is greatly enhanced by the availability of raw products necessary to produce biodiesel, the availability of labor, and the accessibility of many forms of transportation. Long-term poverty and job deterioration in the Delta region, specifically Phillips County where the poverty level was 32.7% in 1999, coupled with its rich array of renewable resources and agricultural knowledge, makes this a particularly interesting and necessary location for initiating economic and community development.

Arkansas ranks ninth in the United States for the production of soybeans with the vast majority of the crops being grown in the eastern Delta region. More than 6,800 Arkansas soybean farmers produce about 110 million bushels on 3.5 million acres of farmland. 33% of the

annual production is processed in Arkansas into raw components leaving the remaining non-crushed beans to be shipped to port areas. The eastern region of Arkansas is well served by all modes of transportation, including ports and airports, pipelines, rail and trucking. Arkansas is fortunate to have the soybean producing counties on or close to three major rivers to facilitate transportation down to New Orleans, La.

Due to these significant challenges and opportunities, a group of proven leaders in the construction, manufacturing, marketing and testing of biodiesel have joined together to initiate this project. They have identified existing abandoned facilities for potential retrofit to methyl ester biodiesel production from vegetable oil that will now only allow for low cost capital development, but also potentially serve as a prototype for hundreds of similar locations across the United States. It is based on published academic reports and extends those concepts into an integrated, continuous high throughput process.

The types of equipment planned for use, particularly the use of a continuous extraction column and early removal of the excess alcohol, are especially innovative. The ability to operate in either batch or continuous mode will permit the facility to maximize production even when equipment is temporarily removed from service for maintenance. Specific development needs include validation of reaction kinetics, validation of separation processes, validation of purification methods, and impact and recovery from process upsets.

Waves of legislation and air quality management agreements established in 1999 and continuing to evolve today is significantly increasing the demand for biodiesel throughout the United States. Published estimates suggest that at least five billion gallons of biodiesel fuel will be needed by 2012. With current United States production of clean biodiesel estimated at 15 million gallons this year, the addition of a 30 million biodiesel facility in Eastern Arkansas would increase biodiesel production in the United States by over 200%.

Initial production suggests that adding the fuel catalyst, Dipetane, to biodiesel shows promising effects for decreasing traditional biodiesel's NOx emissions. Establishing credible, scientific documentation of the effects of a biodiesel blended with Dipetane may lead to major public policy and industry standard changes, answering the pressing problem of NOx facing end-users of biodiesel while reducing all other emissions and increasing fuel mileage. The creation of an experimental farm to grow additional oilseed crops and potentially genetically engineer those crops for use with Dipetane in biodiesel also adds a significant research component to our efforts. The research associated with this production could expand the public policy implications, determining the most effective and efficient means of creating clean biodiesel. Additionally, findings will increase the demand and opportunity for farmers nationwide to produce oilseed products for the production of clean biodiesel. For this project alone, over 1 million bushels of soybeans will be required to fulfill the planned facility's 30 million gallon production capacity. Some 1,500 square miles in the underutilized Eastern Arkansas Mississippi Delta region will be farmed, not including the additional development value surrounding lands will achieve. The formation of a biodiesel production facility in this region will serve as a catalyst for development in areas rich in untapped resources, starving for opportunities to rise above third world economic levels.

STATEMENT OF WORK PROJECT LEADERSHIP

Combustion Technologies, LLC, an Arkansas Limited Liability Company, will lead the collaboration of the Arkansas Delta Biodiesel Research Project in coordinating the various phases of planned research and production. Each partner will update Combustion Technologies regularly on project objective progress through a series of meetings, interactions, and written reports. The company will supply the Dipetane necessary for clean biodiesel production and recruit and review proposals of the different partners necessary to see the project to successful completion. Additionally, Combustion Technologies may provide financing where necessary, possible and appropriate to support initial phases of the project.

ENGINEERING/ CONSTRUCTION ANALYSIS

Lurgi PSI is a leading provider of engineering services and plant construction in the fields of renewable resources, food processing, and chemicals on a turnkey basis. Lurgi has been enlisted to provide the design, procurement, and construction of the biodiesel facility in Eastern Arkansas if the study proves the facility to be feasible. The pre-engineering study will include project development, process design, detailed design, equipment procurement, general contracting specialty fabrication, cost accounting and start-up assistance.

Preliminary engineering design for the feasibility study would produce the following information:

- Process flow diagrams with material balance
- Preliminary equipment specifications and guide drawings
- Preliminary instrument list and specifications
- Preliminary piping and insulation specifications
- Preliminary project site map and equipment layout
- Preliminary Civil Structural design criteria
- Preliminary control system specification and architecture
- Preliminary definition of site utility and site infrastructure
- Preliminary definition of environmental permit requirements

The new production facility would manufacture methyl esters from soybean oil. The facilities proposed by Lurgi PSI are:

Deacidification of Degummed Soybean Oil	104,000 metric tons/yr
Transesterification of Treated Soy Oil	100,000 metric tons/yr
Methyl Ester Drying	100,000 metric tons/yr
Glycerin Water Pretreatment	30,000 metric tons/yr
Glycerin Water Evaporation	12,500 metric tons/yr
Pharmaceutical Grade Glycerin	9,300 metric tons/yr

SITE DEVELOPMENT

Helena-West Helena/Phillips County Port Authority operates the United State's largest new slackwater facility, sixty-five miles south of Memphis, TN, at mile marker 652 on the Mississippi River. Four and one half miles of slackwater frontage and over one mile of fast water

frontage is included in Helena Harbor's 4,000 acre 26 million dollar industrial park. This ideal inland harbor has turning areas and fleeting facilities that are two and one fourth miles long, 300 feet wide and nine feet deep. It has full utilities, interstate highway access, a major oil pipeline, and the industrial park is serviced by rail. The Port Authority has all of the facilities necessary for operation of grain storage, grain processing, and biodiesel manufacture. The Port Authority has been a moving force in bringing the biodiesel potential to the attention of the area agriculturists.

The Port Authority has taken the lead in providing the site for the biodiesel plant and will make available 20 acres of land for the development of a plant in the slackwater facility.

PRODUCT DEVELOPMENT/FARMERS COOPERATIVE FORMATION

Delta Regional Energy Development Group, LLC, is a public benefit corporation formed under Arkansas Act 1147 of 1993, the Nonprofit Corporation Act. The principal purpose of the company is to create interest in, and attract to the Delta areas in Arkansas and surrounding states, economic growth which will have a value-added impact upon the agricultural economy. This would include the feasibility of producer cooperatives, ethanol and biodiesel production, additional grain storage and processing facilities and additional crops for increased production.

The Group will provide technical support and aid in the fundraising processes related to environmental improvements and agricultural research, supporting the development of the Farmer's Blend Cooperative, a group of Delta regional farmers collaborating to grow oilseed crops for the production of biodiesel. The formation of the Farmers Blenders Cooperative will give rise to the eventual construction of the grain storage terminal and soybean oil extrusion plant.

MARKET ANALYSIS

An extensive market analysis will be performed by West Central Soy, a seventy-five year old Iowa-based corporation that has been producing and marketing biodiesel since 1996. In that time, West Central Soy has developed a nationwide network of biodiesel distribution that is currently utilized to channel their present biodiesel production capacity of 12 million gallons into the diesel market. They market biodiesel production from other manufacturers to meet demand in various regions of the country and exports to several countries. Two West Central Soy Representatives are working closely with the petroleum industry to develop an extended sales force that provides biodiesel fuel blends to the diesel fuel consumer. This biodiesel marketing model developed by West Central is being employed successfully with plans to expand the marketing to meet growing demand.

West Central Soy will utilize this distribution network to assist the Arkansas biodiesel facility to provide a market outlet for their production. The company will perform a market analysis and provide support and research pertaining to marketing and sales, market development, distribution and logistics, risk management, transaction processing, and byproduct marketing. West Central Soy will provide the biodiesel production technology to ensure reliable supply of high quality biodiesel.

TESTING AND RESEARCH

Southwest Research Institute in San Antonio, Texas, a nationally recognized, independent nonprofit corporation will research the addition of a proven fuel catalyst, Dipetane, to biodiesel in order to reduce the current problem of an increase in NOx during the combustion of biodiesel. This will aid in the development of a new product, which will address the remaining negative facing the biodiesel industry, and enhance the economic viability of biodiesel usage. In addition to biodiesel production, the fuel catalyst, Dipetane, will also be manufactured on-site. The fuel catalyst is mixed in a 1:200 ratio with a fossil fuel based carrier oil. Southwest Research Institute will be researching the possibility of using biodiesel as the carrier oil. This possibility opens up a wide range of interactions between the biodiesel industry and the petrochemical infrastructure.

Southwest Research Institute is not affiliated with any government agency, educational institution, or corporate entity, nor does it endorse products or services. The Institute will conduct an emissions screening test of Dipetane-treated fuels against baseline or reference fuels composed of biodiesel. The program of tests may include the following:

- Baseline Fuel (Fuel R)
- Dipetane Treated Baseline Fuel (Fuel C1)
- Dipetane + Baseline Fuel as 80% fuel, 20% biofuel (B-20) (Fuel C1)
- Dipetane Treated B-20 (Fuel C3).

Southwest Research Institute has proposed that these fuels be run in the order of RRR, C1C1C1 on Day 1, and C2C2C2 C3C3C3 on Day 2, where each symbol ("R") represents a "hot-start transient run" for HC, C), NOx, Co2 and PM over a period of two days of testing. Fuel economy in terms of lb/hp-hr will be established by carbon balance.

A hot-start transient run is essentially a process defined in the CFR Title 40, Part 86, Subpart N for measuring regulated emissions from a heavy duty diesel engine. Southwest Research routinely runs this procedure as part of our work for EPA and engine OEM, as well as others with the need for emission data. The expected result of this testing will be the significant reduction of NOx in biodiesel treated with "Dipetane." This expectation is based upon the results of extensive testing of diesel treated with "Dipetane." Southwest Research will also do a comparison of biodiesel and carrier oils, such as Telura 619, to determine the feasibility of using biodiesel instead of fossil fuel based carrier oils.

RETROFIT ANALYSIS

Chemical Engineer, Donald Malcolm, will provide expertise in the determining the feasibility of retrofitting an existing abandoned chemical facility in Helena, Arkansas, Cedar Chemical Plant. His experience as the former Senior Production Engineer at the offline facility (both design and implementation experience) will make him an invaluable part of the team. It is anticipated that an existing facility will require significantly less design engineering and construction and can more quickly be brought to start-up than building a new facility from the ground up. This creative and imaginative retrofitting analysis will demonstrate a low cost approach to the production of biodiesel. After initial laboratory testing, the retrofitting process

will be adapted to a plant trial, eventually scaling-up to commercial production. The Cedar Chemical Plant is unique in that it can be operated either continuously or in a batch mode. This dual production capability will allow for experimental innovations to validate new concepts as they are devised, without impacting standard daily production.

MONITORING AND EVALUATION

Combustion Technologies will lead partners in an on-going monitoring and evaluation of the project's feasibility and progress. Initial expectations suggest a 9-12 month timeline for securing site acquisition, determining retrofit capabilities, conducting market analysis, testing products, and establishing the agricultural development schedules. Combustion Technologies will conduct regular meetings and site visits with partners, comparing accomplishments of the activities related to each project objective in addition to any reporting requirements established by funders.

Assisting in this task will be the International accounting and financial consulting firm of Moore, Stephens & Frost, which is also known as MSF Financial Group. It will provide ongoing research and evaluation assistance. The seventy year old Little Rock law firm of Eichenbaum, Liles & Heister, p.a., will provide all legal research and technical assistance that will be required. And the accounting firm of Johnson & Associates, p.a., which for more than thirty-five years has represented industrial, agricultural, and mining clients, will provide audit and accounting services for the project.

At the end of the proposed project timeline, a written document with the following table of contents will be produced by the partnership to discuss the challenges and successes of the study and recommendations for the continuation of the project.

- I. Introduction and Scope of Work
- II. Engineering Study
 - A. Retrofitting of Cedar Chemical Plant
 - B. Construction Plan for New Biodiesel Facility
- III. Biodiesel Research and Development
 - A. New Product Development – Biodiesel/Fuel catalyst results
 - B. Carrier Oil Study
- IV. Demographic and Site Location Analysis
- V. Marketing Analysis
- VI. Legal and Legislation Study
 - A. Legal Structure of organization
 - B. Biodiesel Legislation and Incentives
- VII. Evaluation
 - A. Summary and Conclusions
 - B. Recommendations

This document will provide funders and potential investors with an understanding of the project's strengths, weaknesses, and public policy implications, detailing the approach for remedying challenges and enhancing production to ensure maximum environmental improvements and full operational capacity.

PART II. STATEMENT OF CAPABILITIES

❖ COMBUSTION TECHNOLOGIES, LLC

John H. Haley and his wife Cynthia are the principals of Combustion Technologies, LLC. Cynthia is a UAMS graduate, a licensed realtor, and a managing director of Combustion Technologies. Haley has held directorships in a number of Arkansas firms, including garment, wood products, and shoe manufacturing companies, and telephone and telecommunications companies. Some of the companies for whom he has served as counsel and director have grown from start up to over \$100,000,000 in annual sales. Haley is also a tax attorney and an industrial real estate developer. He has taught at the University of Arkansas Little Rock and the Arkansas Law School, and has been lead attorney in some of the great landmark cases of the past four decades. He is listed in most Who's Who publications and has the highest professional rating.

Combustion Technologies, LLC is the distributor of Dipetane, a fuel catalyst developed and long used in Ireland. It is also active in development of a simple engine using Nitinol bands in conjunction with heat from natural sources. The objective is to provide the means of pumping water, refrigerating foods, and meeting other needs in Third World countries.

The advisory board assists Combustion Technologies in the challenge of competing in the very competitive fuel industry. They provide guidance and feedback about the goals, objectives, and direction of this endeavor, enhancing the management team to bring about sound business knowledge and expertise. Our advisory board members have been selected based upon their business acumen, ability to create new business, and their overall knowledge and influence in the business world.

PRESENT ADVISORS

- John S. Haley, Senior Vice President for Acquisitions, Alltel, fifth largest Independent telephone and cellular company in the United States
- David C. Haley, Partner, HBK Holdings, Dallas, Texas, investment firm managing 3.5 billion dollars, former public securities attorney
- Drexel Martin, retired Vice President, Shell Oil, Houston, Texas
- Bob Pond VP Marketing, ORIX USA Corporation
- Richard McPherson Energy Technology and Development Consultant
- Morris Cranmer, PhD, Chemist and Toxicologist, Cranmer and Associates, former Director of the National Center for Toxicological Research
- Asa Morton, Owner, American Interplex Laboratories
- Steve Sanders, PhD, Graduate MIT, Plasma Physics, Owner NATCO

❖ LURGI PSI www.lurgipsi.com

Lurgi PSI is an integral part of an international engineering and technology group that has developed biodiesel and similar oleochemical projects around the world for several decades. They have an outstanding development record in terms of numbers of plants, production capacity, variety of feedstocks, and by-products. Lurgi biodiesel plants are a proven process with an operational history.

Lurgi PSI is a world leader in several specialized fields of engineering and construction due to its superior technology, innovation, and ability to meet the needs of the client in rapidly evolving industries. The vast resources of technology available through our relationship with Lurgi PSI will be a valuable asset in the feasibility study process. (See attached resumes for Josef Haeupl and Ray Jones)

❖ **DONALD W. MALCOLM** – dmalcolm@cox-internet.com

Chemical Engineer Donald Malcolm will provide expertise in the feasibility of retrofitting the Cedar Chemical Plant in Helena, Arkansas. If negotiations for the Cedar Chemical facility prove to be successful, his experience as Senior Production Engineer at the plant with both design and implementation experience will make him an invaluable part of the team. An existing facility will require significantly less design engineering and construction and can more quickly be brought to start-up. The creative and imaginative retrofitting of an existing plant will serve to demonstrate a low cost approach to the production of biodiesel. The feasibility study will allow for laboratory and initial process development. After initial laboratory testing, the process would be readily adapted to a plant trial with eventual scale-up to commercial production. The Cedar Chemical Plant is unique in that it can be operated either continuously or in a batch mode. This concept would allow for innovations to be tried on a plant scale to validate new concepts as they are devised. (See attached resume)

❖ **HELENA-WEST HELENA/PHILLIPS COUNTY PORT AUTHORITY**

To encourage the development of a new biodiesel facility in Phillips County, the Port Authority would agree make available its infrastructure and would contribute the use of land for construction of storage, processing and transportation facilities. In addition to all of these necessary components of the completed project, its sites would also be available as a biodiesel manufacturing plant location in the event that the retrofitting of Cedar Chemical plant becomes impractical.

❖ **DELTA REGIONAL ENERGY DEVELOPMENT GROUP**

Delta Regional Energy Development Group, Inc. is a Non-profit Arkansas Corporation formed to promote biomass material processing and manufacture, and to assist in the formation of local cooperatives of farmers which would provide the storage and processing facilities for these industries. Its Board of Directors consists of many of the leading farmers in the Phillips County region, as well as representatives of Combustion Technologies and the Helena/West Helena Phillips County Port Authority. These farmers raise soybeans, cotton, corn, wheat, grain sorghum, and milo.

❖ **WEST CENTRAL SOY** www.west-centralsoy.com

West Central was incorporated in 1933 in Ralston, Iowa, which is still its headquarters. They have been adding value to member soybeans since the 1940's. Employing 250 people, West Central has annual sales of \$250 million. 27 million bushels of soy oil are processed into alkyl esters annually by West Central. Some of West Central Soy's valued customers include the US military, US Department of Defense, National Parks, MFA Oil, Walmart, and hundreds of B20 fleets across the United States.

GARY HAER – Biodiesel Sales and Marketing Director, Vice President National Biodiesel Board. Has increased sales from 0 to 2 million gallons with projected sales in 2003 of 5-6 million gallons.

MYRON DANZER – Biodiesel Plant Manager, National Biodiesel Board
National Accreditation Committee

NILE RAMSBOTTOM – Executive Vice President Soy Division

❖ **SOUTHWEST RESEARCH INSTITUTE** www.swri.org

Located on 1200 acres in San Antonio, Texas, Southwest Research Institute has state-of-the-art equipment and facilities. Southwest Research Institute performs applied contract research and development and encourages technology transfer. Almost two million square feet of laboratories, offices and test facilities support work on almost 1500 client projects each year. Southwest Research has a wide range of technical competencies and breadth. Its 2800 staff members in 11 technical divisions have expertise in such areas as chemistry, space sciences, nondestructive evaluation, automation, engine design, mechanical engineering, electronics and more. The Institute can assemble a multidisciplinary team of experts required by any technical project. The Fuels Analysis Laboratory in the Emissions Research Division will be conducting the emissions testing on Dipetane treated biodiesel. This Division offers virtually every standard industry test.

❖ **UNIVERSITY OF ARKANSAS DIVISION OF AGRICULTURE** www.arkagriculture.org

The mission of the University of Arkansas Division of Agriculture is to provide research-based information to help Arkansans improve their economic well-being and the quality of their lives. They offer advice on a number of subjects related to specialty enterprises including, planning, enterprise budgets, production, marketing and value added products.

❖ **ARKANSAS DEPARTMENT OF ECONOMIC DEVELOPMENT** www.aedc.state.ar.us

The Arkansas Department of Economic Development is committed to providing a team of business development professionals to bring better jobs to the people of Arkansas. The Community Development Section focuses on technology in the energy field addressing alternative sources of power and fuels and will offer support in the following areas:

- Building and Sites
- Financing
- Incentives
- Export assistance
- Business development
- Technology assistance
- Permits

PROFESSIONAL PROFILE

JOSEF HAEUPL

EXPERIENCE

Director of Technology and Engineering

- Director Technology, Lurgi PSI, Memphis, TN and Lurgi Life Sciences, Bad Bubendorf, Switzerland. Business development and front-end engineering including feasibility studies and business planning.

Selected Projects:

Feasibility, conceptual and preliminary engineering for a BioDiesel Production Facility at Southern States Power Company, Riverside CA. Various studies to evaluate and compare alternative feedstock and process routes applicable in the BioDiesel Industry. Usable feed materials include vegetable oils, beef tallow, greases (yellow grease, brown grease), recycled fryer oils and Soapstock from oil refining.

- Director Technology, Pharmaplan GmbH, Bad Homburg, Germany and Pharmaplan N.A., Philadelphia, PA Focussing on business development and front-end engineering.

Selected Projects:

Conceptual through detailed engineering for a GMP compliant API Technikum at Byk Gulden, Singen, Germany. Feasibility study for a GMP compliant API Manufacturing facility at Transopharm, Hamburg, Germany.

- Manager of Engineering, Lonzagroup, Fair Lawn, NJ. Head of engineering for all of Lonza's sites in the US, including Lonza's Oleochemical sites in Painesville, OH, Williamsport, PA, and Mapleton, IL. Activities included feasibility evaluation, engineering, procurement, construction supervision as well as project management and start-up services.

Selected Projects:

Fatty Acid Distillation System in Painesville, OH (1998) Various de-bottlenecking projects in Painesville, OH (1995-1997), including

PROFESSIONAL PROFILE

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JOSEF HAEUPL

EXPERIENCE (cont.)

Hydrogenation, Fatty Acid Splitting and Glycerin Processing. Expansion of Lonza's Ester Facility in Williamsport, PA (1997), from feasibility study to implementation, including Esterification, Ethoxylation, Spray Drying and Packaging systems. Batch Distillation System for Alcohols, Fatty Acids and Amines in Mapleton, IL (1986) Crystalline Sorbitol Production Plant in Mapleton, IL (1985) Responsible for in-house process development, design, installation and start-up of the facility. Site Development Planning for all Lonza sites in the US. Review and alignment of all site related activities with the corporate business plan for the Lonza Group's sites, including Painesville OH, Williamsport PA, Mapleton IL as well as Bayport TX, Conshohocken PA, Los Angeles CA and Long Beach CA.

EDUCATION

MBA in Management, Fairleigh Dickinson University, College of Business Administration, Teaneck, NJ

Engineering Certificate, Dipl.-Ing. (FH) in Mechanical Engineering, State College Aalen, Aalen, Germany

PROFESSIONAL AFFILIATION

American Oil Chemist's Society (AOCS)
International Society of Pharmaceutical Engineering (ISPE)
German Association of Engineers (VDI- Verein Deutscher Ingenieure)

PROFESSIONAL PROFILE

RAY JONES, P.E.

EXPERIENCE

Project Management

- Managed multiple plant projects for a major chemical corporation from concept through design and construction.
- Project Manager in the Corporate Engineering Division for a specialty chemical corporation. Managed capital projects from conception to mechanical completion and start-up. Responsibilities included capital cost and schedule control. Working relationships were maintained with contractors, manufacturing personnel, customers, and regulatory agency personnel.
- Senior Process Engineer, Interim QA/QC Supervisor, and an Engineering Supervisor for a specialty chemical corporation. Managed capital projects and small group of engineers and draftsmen.
- Project Engineer, Maintenance Engineer, Area Process Engineer, Process Engineer, Senior Process Engineer, and Production Supervisor for a specialty chemical company. Managed capital projects, scheduled maintenance, designed process improvements, and managed up to 27 employees in manufacturing of solid product. Processes included handling of solids, liquids, and gases.
- Completed a \$54 million capital expansion which included a new 200,000 lb/hr boiler, plus the following new process facilities:
 - 208,000 SCFH hydrogen plant
 - 30 million pound per year polymer additives plant
 - Pre-treatment process for Furfural
 - A Tetrahydrofuran production facility
 - A wastewater stripping and treatment facility
 - Miscellaneous plant utility system

PROFESSIONAL PROFILE

PAGE 2 OF 3

RAY JONES, P.E.

EXPERIENCE

- Designed and installed facilities for production of 4 million pounds per year of paper sizing agent for proprietary customer. \$3.3 million capital. Later debottlenecked production to 7.3 million pounds for \$1.4 million capital.
- Designed and installed facilities for production for low toxicity pesticide for livestock application for proprietary customer. \$3.4 million capital. Included toxic fume incinerator.
- Designed and constructed semi-works facility for manufacture of proprietary chemical for a specialty chemical facility. Final product, raw materials and intermediates control required extraordinary containment measures due to extreme toxicity. Manufactured the purest product customer had seen during technology development.
- Designed and constructed facilities using existing equipment for toll manufacture of brominated specialty chemical for a specialty chemical facility.
- Designed and constructed facilities for toll purification of organic agricultural chemical for Rhone Poulenc. Removed impurity allowing product to meet customer specifications.
- Designed and constructed 600 gpm industrial wastewater treatment facility for widely variable plant wastewater quality. System featured unique design for pH control. Final effluent disposal was by underground injection well.
- Designed and constructed facilities for toll manufacture or proprietary agricultural chemical for a specialty chemical company. Designed for 12,000 pounds per day and produced over 16,000 pounds per day of product.
- Designed and constructed facilities using existing equipment for toll manufacture or proprietary organic chemical for a specialty chemical company. Process required safe unloading and handling of organic isocyanate compound and drying of final powdered product under intense vacuum.

PROFESSIONAL PROFILE

PAGE 3 OF 3

RAY JONES, P.E.

EXPERIENCE

- Managed \$35 million environmental remediation project covering pond closures, landfill closures, and soils and groundwater remediation. Project included above ground treatment facilities.

EDUCATION

Bachelor of Science in Chemical Engineering
University of Arkansas
Fayetteville, Arkansas

TRAINING

Professional Engineers License
State of Tennessee

Fundamentals of Successful Project Management
Memphis

Conflict Resolution Seminar
Memphis

Questimate Cost Estimate
Bethesda

OSHA 40 Hour Training
Memphis

NIOSH 40 Hour Course
Philadelphia

Economic Principles
St. Louis

Donald W. Malcolm
312 North 7th St.
West Helena, AR 72390
Home Phone (870) 572-9462
Email: dmalcolm@cox-internet.com

SUMMARY

Highly skilled, flexible and motivated chemical engineer with more than 20 years of extensive operations, engineering, and supervisory experience in world-class chemical facilities. Team player with broad experience in both continuous and batch processes. Extensive experience in environmental control, quality improvement, distillation, fluid flow, heat transfer, metallurgy and mass & material balances. Highly skilled in process definition, optimization and improvement methods focused on safety, environmental compliance and operability. Highly developed cost control and budgeting skills targeted toward maximum return on investment. Intimate knowledge of injury management and prevention processes. Skilled in both oral and written communications as well as in the use of PC's for productivity enhancement and business analysis (AutoCad LT, Visio, MS Office, Lotus).

OBJECTIVE

To obtain an interesting and challenging engineering position in the chemical manufacturing industry allowing me to use my skills in chemical process improvement, plant operations, design and problem solving and to deepen and broaden my experience base. To afford the opportunity to further develop my skills in business evaluation and development.

WORK HISTORY

Plant Engineer, Cypress Chemical Co., Helena, AR (2002-Present)

Managed capital projects in excess of \$500K. Designed and managed on time and in budget installation of a new sludge handling process. Developed economics for conversion of plant to direct purchase of natural gas and implemented conversion, including negotiation of gas purchase and transportation contracts. Developed and implemented detailed raw materials monitoring process. Responsible for coordination with consultants and contractors for plant storm water monitoring and air permit testing. Identified and developed product treatment process to reduce odor and dust.

Senior Production Engineer, Cedar Chemical Corp., West Helena, AR (2000-2002)

Organizational realignment during restructuring that placed focus on operational problem solving and troubleshooting skills. Oversee the activities of three process engineers to establish priorities and coordinate engineering manpower. Coordinate turnarounds between custom manufacturing projects, monitor production yields and identify and implement improvement opportunities, develop and review P&I diagrams, write and teach operating procedures. Designed and implemented change from batch process to semi-continuous process resulting in 80% increase in throughput at no capital expense. Identified process changes to a 4-step batch process resulting in an increase in throughput of 30% with minor capital requirements. Designed and implemented an impurities purge system saving approximately \$60K over 120 day campaign with more consistent control of product quality.

Production Manager, Cedar Chemical Corp., West Helena, AR (1999-2000)

Responsible for the day-to-day operations of three chemical process units and packaging warehouse including troubleshooting and engineering improvements. Supervise a team of 38 operators, 4 shift supervisors, a packaging supervisor and one Production Superintendent. Successfully managed process start-ups for 6 custom projects in a 1 year span. Work with process engineers to finalize process designs for the custom units. Key client contact for custom projects. Work extensively with support groups to improve the physical plant. Coordinate with marketing and logistics to insure raw material and product availability. Recognized "change agent." Initiated, chaired, and championed multiple problem solving teams to address key operational and management concerns including operator skills progression and product quality improvements. Manage personnel development in area, identifying needs and developmental opportunities for both supervisors and operators.

Sr. Process Engineer, Cedar Chemical Corp., West Helena, AR (1997-1999)

Responsible for all process engineering projects in two custom batch chemical production units. Successfully managed start-up and operation of 3 custom projects resulting in improved yields (up to 30%), decreased rework and lower costs. Work closely with client representatives in the development, start-up, and operation of custom projects. Identify, develop, and implement process modifications for reducing costs, increasing efficiencies, and improving quality. Conduct custom process reviews to analyze "fit" and operational economics; develop initial process design. Conduct major incident investigations including root cause analysis, corrective action recommendations, and coordinate follow-up. Responsible for the development, communication and document control of operating procedures for units. Conduct hazard reviews, with documentation, of all process changes. Identified key control point in unit operations resulting in a 1/3 reduction in manufacturing costs with a 20% increase in production. Developed and implemented manufacturing cost model to aid in real time decision making. Directed custom process start-up in record time with improved performance. Negotiated raw material and conversion yields with client.

Owner/President, White River Investments, Inc., Rose Hill, KS (1995-1997)

Created holding corporation to purchase and operate a retail dry cleaning business. Operated and managed multi-location business employing 14. Handled all day-to-day functions of business including bookkeeping, advertising, production, environmental control, customer service and maintenance. Turned business from questionable profitability to solid financial performance. Developed key client relationships resulting in increased repeat business by exemplary customer service. Sold business at a substantial return.

Production Superintendent, Vulcan Chemicals, Wichita, (1991-1995)

Managed area of four production units with 42 operators, 5 shift supervisors, 3 day supervisors and an engineer. Responsible for production volumes, quality and cost control. Responsible for planning and implementation of OSHA process safety requirements, ISO 9000 certification of all products, environmental compliance, and TQM initiatives. Our department was awarded President's Quality award two years in a row. Completed OSHA PSM activities ahead of schedule. Participant on inter-company team with major customer to identify needs and provide support. Department attained and maintained ISO certification on all products. Performed day-to-day process troubleshooting. Developed comprehensive corrosion control program leading to an annual cost reduction of \$1MM. Led plant team for employee recognition and safety performance. Developed process to augment safety performance in addition to plant safety process. Conducted business analysis of process unit

resulting in decision to cease that operation. Department established numerous all-time production records. Developed, implemented and monitored annual budgets of approximately \$30MM.

Operations Manager, American MicroTrace Corp., Fairbury, NE (1990-1991)

Site manager for small agricultural micronutrients production facility. Full P&L responsibility for site employing 28 personnel with an annual budget of \$10MM. Developed and implemented effective safety process. Effectively reduced incidence and severity of injuries by instituting management controls. Developed and implemented effective management process by defining responsibilities and instituting controls. Instituted use of SPC to begin definition of process capabilities.

Production Superintendent, Vulcan Chemicals, Geismar, LA (1978-1990)

Responsible for all facets of production, safety, and maintenance. Supervised departments of up to 22 operators, 5 shift supervisors and 2 day foremen with annual budgets up to \$25MM. Departments routinely established production, safety, and on-stream time records. Managed interdisciplinary team to debottleneck process and increase capacity by 50%. Developed fundamental cost projection methods for processes. Member of multi-site team which developed corporate environmental release prevention policy. Founding member of plant Quality Council. Created inter-company communications team to coordinate pipelined product movements between four different companies. Company representative for international technical group, presented paper at international conference. Wrote and taught operating procedures.

EDUCATION

1977	B. Ch. E., Georgia Institute of Technology
1977	EIT Certified - State of Georgia
1987	Deming Quality Process, Hertz Group
1995	Butler County Community College, misc. course work

BUDGET

Statement of Work	Cost	Contribution (in-kind)
Engineering Study		
A. Lurgi PSI (detail attached)	\$200,000	\$100,000
B. Don Malcolm (detail attached)	518,500	50,000
Research Study		
Southwest Research Institute (detail attached)	25,000	0
Combustion Technologies 2000gal. Dipetane @\$10 (market price)	20,000	20,000
University of Arkansas Experimental Farm	0	0
Site Location New Biodiesel facility/ Retrofit of Plant		
Helena Port Authority 20acre 5yr. Lease	200,000	200,000
Cedar Chemical Retrofit	100,000	0
Arkansas Department of Economic Development	0	0
Marketing Study		
West Central Soy	75,000	50,000
Arkansas Department of Economic Dev.	0	0
Legislative/Legal Research		
Moore, Stephens and Frost (detail attached)	48,000	18,000
Eichenbaum Law Firm (detail attached)	120,000	50,000
Support Services		
Johnson and Associates, CPA (detail attached)	78,000	28,000
Combustion Technologies, LLC (detail attached)	375,000	275,000
TOTAL COSTS	\$1,759,500	\$791,000
TOTAL GRANT REQUESTED	\$968,500	

NOTE: The project Term is five calendar Quarters, commencing August 2003, or when funded, whichever is later. The tests, pre-engineering studies, initial retrofit expense, site location, and research and planning will be completed in the first two quarters. The remaining expense will be incurred rateably over the life of the project.

BUDGET: LEGISLATION/LEGAL RESEARCH

MOORE, STEPHENS & FROST, P.A., C.P.A.s TOTAL \$48,000

Tom Gibbons of the Little Rock, Arkansas, office will be in charge. He is a senior partner in the firm. The firm will assist in identifying and quantifying the incentives offered by states and the federal government for the use of biodiesel products. Gibbons' billing rate is \$250 an hour, and he will be aided by assistants whose rates range from \$80 an hour to \$175 an hour. Their estimate of time required is 300 hours, at a blended rate of \$160 an hour.

EICHENBAUM, LILES & HEISTER, P.A. ATTORNEYS TOTAL \$120,000

Eichenbaum Firm is a seventy year old Little Rock law firm specializing in commercial and financial matters. Charles McDaniel, attorney and C.P.A., will be in charge of the project. The firm will identify and quantify the incentives offered by state and federal agencies for the use of biodiesel products specifically, and for the use of products which decrease emissions, including biodiesel. The firm will also research the permits required for biodiesel plant installation and production, transportation of biodiesel by barge and pipeline, and qualification of the biodiesel facility for available tax credits and subsidies. The firm will form the farmers' cooperative which will produce the feedstock and operate the experiment farm. McDaniel's billing rate is \$200 an hour. Other lawyers and paralegals who will assist him have billing rates ranging from \$150 an hour to \$60 an hour. The firm estimates that the time required will be 800 hours at a blended rate of \$150 an hour.

BUDGET: SUPPORT SERVICES

JOHNSON & ASSOCIATES, C.P.A.s TOTAL \$78,000

The accounting firm of Johnson & Associates, of Little Rock, Arkansas, will provide accounting and audit services for the project out of its Little Rock, Arkansas, office. It will also make application for all permits and authorizations, and will file all reports required or needed. Michael B. Johnson of that office will be in charge. He is a senior partner in the firm. His billing rate is \$175 an hour. Others in the firm that will be working on this project have billing rates ranging from \$45 an hour to \$140 an hour. The firm estimates that the time required will be 650 hours at a blended rate of \$120 an hour.

COMBUSTION TECHNOLOGIES, LLC TOTAL \$275,000

The Applicant Combustion Technologies will provide the Project Director, who will be John Haley, President, and whose billing rate is \$250 an hour, his assistant Cynthia Haley, Vice President, whose charge is \$50 an hour, and a secretary to be selected and who will be paid a salary of \$5,000 per quarter. Travel is estimated at \$1,000 per month, supplies and miscellaneous expenses at \$1,000 per month, and rent of office space at \$1,333 a month. Haley estimates that Cynthia will be working full time on the project for five quarters, and that he will be devoting about 1,000 hours to the project over that same period of time. The total cost will be \$75,000 per quarter for the five quarters of the project duration.

	<u>1st Quarter</u>	<u>2nd Qtr.</u>	<u>3rd Qtr.</u>	<u>4th Qtr.</u>	<u>5th Qtr.</u>
Project Director	50,000	50,000	50,000	50,000	50,000
Rent	4,000	4,000	4,000	4,000	4,000
Assistant	10,000	10,000	10,000	10,000	10,000
Secretarial	5,000	5,000	5,000	5,000	5,000
Travel	3,000	3,000	3,000	3,000	3,000
Supplies, Misc.	3,000	3,000	3,000	3,000	3,000
Total	75,000	75,000	75,000	75,000	75,000

BUDGET: RESEARCH

SOUTHWEST RESEARCH INSTITUTE TOTAL \$25,000

The program of tests may include the following:

- Baseline Fuel (Fuel R)
- Dipetane Treated Baseline Fuel (Fuel C1)
- Dipetane + Baseline Fuel as 80% fuel, 20% biofuel (B-20) (Fuel C1)
- Dipetane Treated B-20 (Fuel C3).

Southwest Research Institute has proposed that theses fuels be run in the order of RRR, C1C1C1 on Day 1, and C2C2C2 C3C3C3 on Day 2, where each symbol ("R") represents a "hot-start transient run" for HC, C), NOx, Co2 and PM over a period of two days of testing. Fuel economy in terms of lb/hp-hr will be established by carbon balance.

BUDGET: ENGINEERING

LURGI PSI TOTAL \$200,000

Lurgi PSI will do the pre-engineering report to include the following:

- Process flow diagrams with material balance
- Preliminary equipment specifications and guide drawings
- Preliminary instrument list and specifications
- Preliminary piping and insulation specifications
- Preliminary project site map and equipment layout
- Preliminary Civil Structural design criteria
- Preliminary control system specification and architecture
- Preliminary definition of site utility and site infrastructure
- Preliminary definition of environmental permit requirements

DON MALCOLM TOTAL \$518,500

Biodiesel Development Budget DON MALCOLM

Laboratory and Initial Process Development

		Monthly Expense	3-Month Total
Wages and Fringes			
Salaries			
Don Malcolm *		8000	24000
Contract Chemist	75.25 /hr	9030	27090
Lab Technician	30.00 /hr	3500	10500
Subtotal		20530	61590
Fringes			
FICA *		600	1800
Life and Med. Insurance *		750	2250
Subtotal		1350	4050
Consultant Expense			
Environmental Consultant		5000	15000
Subtotal		5000	15000
Travel			
Mileage		560	1680
Lodging		400	1200
Meals		350	1050
Airfare		1000	3000
Subtotal		2310	6930
Facilities			
Lab and Office (Rent)		2000	6000
Subtotal		2000	6000
Utilities			
Electricity		200	600
Phone		300	900
Water		75	225
Trash		50	150
Natural Gas		50	150
Subtotal		675	2025
Laboratory Expenses			
Parts		1000	3000
Analytic Gases		500	1500
Reagents		400	1200
Waste Disposal		500	1500
Lab Equipment (1x purchase)		5000	5000
Subtotal		7400	12200
Office Supplies			
Copier/Printer		200	600
Supplies		100	300
Subtotal		300	900

Biodiesel Development Budget DON MALCOLM

Laboratory and Initial Process Development

Contingency	(25%)	9891	27174
Grand Total		\$44,456	\$135,869

Biodiesel Development Budget

Plant Scale Production Test

		Monthly Expense	3-Month Total
Wages and Fringes			
Salaries			
Don Malcolm		8000	24000
Operations Supervisor		4000	12000
Operators (2)	\$15 /hr	5040	10080
Lab Technician	\$15 /hr	2520	7560
Subtotal		19560	53640
Fringes			
FICA		1467	4401
Life and Med. Insurance		3750	11250
Subtotal		5217	15651
Consultant Expense			
Environmental Consultant		10000	25000
Subtotal		10000	25000
Plant Trial Preparation and Support			
Mechanical Preparation			
Pipefitting	\$35 /hr	21000	28000
Elec. & Inst. Tech	\$35 /hr	4200	4200
Control System		7000	7000
Millwrights	\$35 /hr	7000	7000
Materials		15000	15000
Subtotal		54200	61200
Utilities			
Boiler rental		15000	30000
Chiller rental		15000	30000
Natural Gas		5000	5000
Water		250	250
Nitrogen		4000	4000
Subtotal		39250	69250
Facilities			
Plant Rental		10000	30000
Subtotal		10000	30000
Raw Materials and Wastes			
Oil		11000	11000
Methanol		525	525
Caustic		500	500
Waste Disposal		7000	7000
Subtotal		19025	19025

Biodiesel Development Budget

Plant Scale Production Test

Travel

Mileage	560	1680
Lodging	400	1200
Meals	350	1050
Airfare	1000	3000
Subtotal	2310	6930

Facilities

Lab and Office (Rent)	2000	6000
Subtotal	2000	6000

Utilities

Electricity	200	600
Phone	300	900
Water	200	600
Trash	50	150
Natural Gas	50	150
Subtotal	800	2400

Laboratory Expenses

Parts	1000	3000
Analytic Gases	500	1500
Reagents	400	1200
Waste Disposal	500	1500
Lab Equipment (1x purchase)	0	0
Subtotal	2400	7200

Office Supplies

Copier/Printer	200	600
Supplies	100	300
Subtotal	300	900

Contingency	(25%)	41266	74299
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Grand Total		\$206,328	\$371,495
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APPLICATION FOR FEDERAL ASSISTANCE

OMB Approval No. 0348-0043

1. TYPE OF SUBMISSION: Application <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Non-Construction Preapplication <input type="checkbox"/> Construction <input type="checkbox"/> Non-Construction		2. DATE SUBMITTED May 15, 2003		Applicant Identifier																													
		3. DATE RECEIVED BY STATE		State Application Identifier																													
		4. DATE RECEIVED BY FEDERAL AGENCY		Federal Identifier																													
5. APPLICANT INFORMATION																																	
Legal Name: Combustion Technologies, LLC			Organizational Unit: Main office - Little Rock, Arkansas																														
Address (give city, county, State, and zip code): P.O. Box 3730 Little Rock, Arkansas 72203			Name and telephone number of person to be contacted on matters involving this application (give area code) John or Cynthia Haley 501-225-9125																														
6. EMPLOYER IDENTIFICATION NUMBER (EIN): <div style="border: 1px solid black; padding: 2px; display: inline-block;"> 71-0830466 </div>			7. TYPE OF APPLICANT: (enter appropriate letter in box) <div style="display: flex; justify-content: space-between;"> <div> A. State B. County C. Municipal D. Township E. Interstate F. Intermunicipal G. Special District </div> <div> H. Independent School Dist. I. State Controlled Institution of Higher Learning J. Private University K. Indian Tribe L. Individual M. Profit Organization N. Other (Specify) _____ </div> </div> <div style="text-align: right; margin-top: -20px;"> <div style="border: 1px solid black; padding: 2px; display: inline-block;">M</div> </div>																														
8. TYPE OF APPLICATION: <div style="display: flex; justify-content: space-around;"> <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision </div> If Revision, enter appropriate letter(s) in box(es) A. Increase Award B. Decrease Award C. Increase Duration D. Decrease Duration Other(specify): _____			9. NAME OF FEDERAL AGENCY: United States Department of Agriculture																														
10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: <div style="border: 1px solid black; padding: 2px; display: inline-block;"> 81-087 </div>			11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT: ARKANSAS DELTA BIODIESEL RESEARCH PROJECT																														
12. AREAS AFFECTED BY PROJECT (Cities, Counties, States, etc.): EASTERN ARKANSAS																																	
13. PROPOSED PROJECT		14. CONGRESSIONAL DISTRICTS OF: ARKANSAS 1ST & 4TH																															
Start Date 8/3/03	Ending Date 11/3/03	a. Applicant Combustion Technologies, LLC		b. Project BIODIESEL PRODUCT DEVELOPMENT AND PLANT																													
15. ESTIMATED FUNDING:		16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?																															
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">a. Federal</td> <td style="width: 10%;">\$</td> <td style="width: 10%; text-align: right;">968,500</td> <td style="width: 10%; text-align: right;">.00</td> </tr> <tr> <td>b. Applicant</td> <td>\$</td> <td style="text-align: right;">295,000</td> <td style="text-align: right;">.00</td> </tr> <tr> <td>c. State</td> <td>\$</td> <td></td> <td style="text-align: right;">.00</td> </tr> <tr> <td>d. Local</td> <td>\$</td> <td style="text-align: right;">296,000</td> <td style="text-align: right;">.00</td> </tr> <tr> <td>e. Other</td> <td>\$</td> <td style="text-align: right;">200,000</td> <td style="text-align: right;">.00</td> </tr> <tr> <td>f. Program Income</td> <td>\$</td> <td></td> <td style="text-align: right;">.00</td> </tr> <tr> <td>g. TOTAL</td> <td>\$</td> <td style="text-align: right;">1,759,500</td> <td style="text-align: right;">.00</td> </tr> </table>		a. Federal	\$	968,500	.00	b. Applicant	\$	295,000	.00	c. State	\$.00	d. Local	\$	296,000	.00	e. Other	\$	200,000	.00	f. Program Income	\$.00	g. TOTAL	\$	1,759,500	.00	a. YES. THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON: DATE 05/15/03 b. No. <input type="checkbox"/> PROGRAM IS NOT COVERED BY E. O. 12372 <input type="checkbox"/> OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW			
a. Federal	\$	968,500	.00																														
b. Applicant	\$	295,000	.00																														
c. State	\$.00																														
d. Local	\$	296,000	.00																														
e. Other	\$	200,000	.00																														
f. Program Income	\$.00																														
g. TOTAL	\$	1,759,500	.00																														
		17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT? <input type="checkbox"/> Yes If "Yes," attach an explanation. <input checked="" type="checkbox"/> No																															
18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT, THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.																																	
a. Type Name of Authorized Representative JOHN H. HALEY		b. Title PRESIDENT		c. Telephone Number (501) 225-9125																													
d. Signature of Authorized Representative 				e. Date Signed 5-15-03																													

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ADEQ0017765

BUDGET INFORMATION - Non-Construction Programs

OMB Approval No. 0348-0044

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Biomass Research	81-087	\$	\$	\$ 848,500.00	\$ 714,000.00	\$ 1,562,500.00
2.						0.00
3.						0.00
4.						0.00
5. Totals		\$ 0.00	\$ 0.00	\$ 848,500.00	\$ 714,000.00	\$ 1,562,500.00

SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total
	(1) Biomass Research	(2)	(3)	(4)	(5)
a. Personnel	\$ 325,000.00	\$	\$	\$	\$ 325,000.00
b. Fringe Benefits					0.00
c. Travel	15,000.00				15,000.00
d. Equipment					0.00
e. Supplies	20,000.00				20,000.00
f. Contractual	1,364,000.00				1,364,000.00
g. Construction					0.00
h. Other	35,500.00				35,500.00
i. Total Direct Charges (sum of 6a-6h)	1,759,500.00	0.00	0.00	0.00	1,759,500.00
j. Indirect Charges	0.00				0.00
k. TOTALS (sum of 6i and 6j)	\$ 1,759,500.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 1,759,500.00
7. Program Income	\$ 0.00	\$	\$	\$	\$ 0.00

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SECTION C - NON-FEDERAL RESOURCES					
(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) TOTALS	
8. Biomass Research and Development Initiative	\$ 295,000.00	\$ 0.00	\$ 496,000.00	\$ 791,000.00	
9. Federal				0.00	
10. Private				0.00	
11.				0.00	
12. TOTAL (sum of lines 8-11)	\$ 295,000.00	\$ 0.00	\$ 496,000.00	\$ 791,000.00	
SECTION D - FORECASTED CASH NEEDS					
	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	\$ 925,500.00	\$ 345,500.00	\$ 254,000.00	\$ 163,000.00	\$ 163,000.00
14. Non-Federal	714,000.00	141,000.00	390,000.00	94,000.00	89,000.00
15. TOTAL (sum of lines 13 and 14)	\$ 1,639,500.00	\$ 486,500.00	\$ 644,000.00	\$ 257,000.00	\$ 252,000.00
SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT					
(a) Grant Program	FUTURE FUNDING PERIODS (Years)				
	(b) First	(c) Second	(d) Third	(e) Fourth	
16. Biomass Research and Development Initiative	\$	\$	\$	\$	
17. Federal	43,000.00				
18. Private	77,000.00				
19.					
20. TOTAL (sum of lines 16-19)	\$ 120,000.00	\$ 0.00	\$ 0.00	\$ 0.00	
SECTION F - OTHER BUDGET INFORMATION					
21. Direct Charges: 1,759,500		22. Indirect Charges: none			
23. Remarks:					

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ADEQ0017765

ASSURANCES - NON-CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant

1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.

10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.

11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).

12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.

13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).

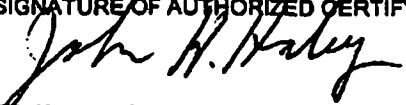

14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.

15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.

16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.

17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."

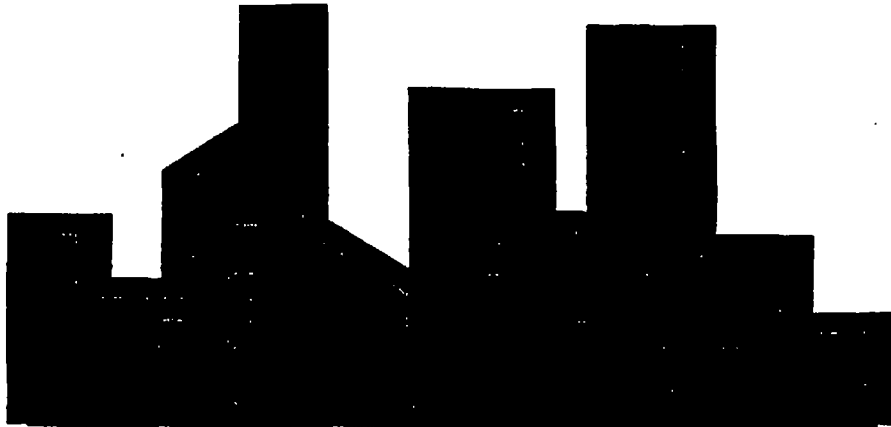
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL 		TITLE 
APPLICANT ORGANIZATION Combustion Technologies, L.L.C.		DATE SUBMITTED May 15, 2003

Standard Form 424B (Rev. 7-97) Back

ADEQ0017765

**ARKANSAS DELTA BIODIESEL
RESEARCH PROJECT**



**BIOMASS RESEARCH AND DEVELOPMENT INITIATIVE
031803-001**

**BY
COMBUSTION TECHNOLOGIES, LLC
HELENA- WEST HELENA/PHILLIPS COUNTY PORT AUTHORITY
LURGI, PSI**

**ARKANSAS DEPARTMENT OF ECONOMIC DEVELOPMENT
DELTA REGIONAL ENERGY DEVELOPMENT GROUP, INC.
UNIVERSITY OF ARKANSAS DIVISION OF AGRICULTURE**

May 15, 2003

TECHNICAL SUMMARY

Combustion Technologies, LLC, Helena-West Helena/Phillips County Port Authority, Lurgi, PSI, Delta Regional Energy Development Group, Inc., Arkansas Department of Economic Development, and the University of Arkansas Division of Agriculture (Applicant) proposes to study the feasibility of providing the economically distressed Eastern Arkansas Mississippi River Delta region with a facility capable of producing up to 30 million gallons of biodiesel annually.

The Applicant will explore:

- 1) The probability that the addition of fuel catalyst, Dipetane, to biodiesel results in a substantial reduction of Nitrous Oxide (NOx)
- 2) Using biodiesel as a carrier oil to replace fossil fuel based products
- 3) Genetically engineering oilseed crop-based biodiesel and examining its environmental performance versus traditional biodiesel when both have the catalyst Dipetane; and
- 4) Creating a prototype facility for retrofitting existing abandoned facilities (brownfield conversions) for the production of biodiesel.

With the requested grant funds the Applicant will conduct a variety of research and activities aimed at completing a biodiesel facility project and providing a fuel which will answer the NOx problem facing the end-users of biodiesel worldwide. Activities will include:

- ❖ Retaining an independent research institute to test product blends on the reduction of NOx by blending the proven fuel catalyst, Dipetane, with biodiesel, and to examine the possibility of using biodiesel as a carrier oil.
- ❖ Conducting an engineering study to assess the benefits of retrofitting an existing, abandoned facility versus building a new facility for the production of biodiesel.
- ❖ Performing a market analysis encompassing all areas pertaining to the sale of biodiesel and its byproducts, including present and future demand and national and international markets.
- ❖ Reviewing federal policy, legislation, benefits, incentives, contracts, permits and all legal issues and funding opportunities pertaining to the use and production of biodiesel.
- ❖ Forming a Farmer's Cooperative to create and operate a grain storage terminal and soybean oil extrusion plant, and to develop an oilseed experimental farm to explore alternative genetically-engineered crop opportunities for biodiesel production.

The planned research and activities will provide the Applicant with the information necessary to successfully complete this innovative biodiesel production project. The facility represents significant advances in rural based biodiesel production, handling, processing and manufacturing, and will double the present biodiesel production in the United States. The economy of Arkansas and specifically its Eastern Delta region- one of the poorest rural areas in the United States- will be greatly enhanced. The facility will create approximately 200 new jobs as well as significant opportunities for farmers to add value to their oilseed crops.

The use of Arkansas' abundant soybean crops- ranked 9th nationally- and its other renewable resources will help avoid the depletion of natural resources while also furthering national environmental objectives. The use of biodiesel blended with the fuel catalyst, Dipetane, will answer pressing environmental concerns raised by the EPA, will reduce greenhouse gases, create a healthier environment, and improve strategic energy security and trade balances.

OBJECTIVES: To provide one of the most impoverished areas of the United States with a biodiesel facility which will improve the economy and environment of the Mississippi River Delta, as well as, the entire Southern part of the United States. To make available a product developed to eliminate the most pressing negative issue facing biodiesel in America, NOx. The biodiesel facility will make feasible the construction, by a farmer's cooperative, of a soybean extrusion plant and grain storage terminal.

PROJECT DESCRIPTION

Since 1999, Arkansas-based Combustion Technologies has been working extensively with end-users of hydrocarbon fuels in the transportation industry. In conjunction with Combustion Technologies West (located in southern California) the company has become involved with extensive research into alternative fuel sources, most specifically biodiesel. Combustion Technologies has become acutely aware of the benefits of biodiesel and desires to help provide answers for an alternative fuel and the growing environmental pollution problems in our nation.

Biodiesel is becoming one of the fastest growing alternative fuels in the United States and interest is growing within Arkansas. This tremendous interest from consumers, government and industry, has brought a group of interested parties from all areas of expertise to the forefront to help in bringing this industry to Arkansas. John and Cynthia Haley, principals in Combustion Technologies, have championed this effort.

John's lifelong residence in Arkansas and his business and community activities in and around Arkansas' Delta communities have exposed him to the many challenges that face that region, one of the poorest in the nation. His commitment to improving the environment and his concern for the welfare of his fellow citizens came together one afternoon as he traveled through the Delta. He realized that many of the pieces of the puzzle for improving the Delta were already in place. Combustion Technologies knows how to produce biodiesel. Arkansas ranks 9th in soybean production nationwide, a key component of biodiesel production.

Recent consolidation of the soybean processing industry has left few options for farmers in Arkansas and the Mississippi River Delta. There are only two processors in Arkansas, Riceland Foods in Stuttgart and Archer Daniels Midland in Little Rock, leaving Arkansas farmers few options. They face high freight costs to processing locations and river load-out facilities and have become subject to extremely low prices during the harvesting season.

A feasibility study was done in 2001-2002 by Winrock International (Alexandria, VA) to ascertain the profitability of a grain storage terminal for this Eastern Arkansas Mississippi River Delta region. The findings were discouraging as to the future profitability of the terminal. However, the study showed soybean oil extrusion to be a viable value-added business. This study led the farmers of the Delta Region to look at the possibility of building a grain storage terminal and soybean oil extrusion plant in the same area as the proposed biodiesel facility. As a unified team, a farmers' cooperative can impact the production, quality and availability of soybean production. Thus formed the Farmers' Blenders Cooperative, a group of farmers in the Eastern Arkansas Mississippi River Delta who are committed to the development of and future opportunities for local farmers.

The farmers' cooperative recognizes the market availability and desire to create opportunity and byproducts for an already abundant soybean harvest. The cooperative, with the help of the Delta Regional Development Group, a non-profit community development corporation committed to the economic and educational viability of the Delta region, is committed to begin the work necessary to accomplish this \$10 million project. The cooperative seeks to capitalize on the volume of its harvest and the need for a grain storage terminal to house the significant crop harvests it markets, supplying soybean oil to the biodiesel facility, as well as producing expeller pressed soybean meal, with significant nutritional advantages for feeding certain livestock and fish. Farmers will again have access to better markets through this cooperative effort and the local economy will be stimulated by the approximately 200 new jobs provided by the biodiesel and soybean oil extrusion plants.

In addition to soybean harvesting, the cooperative will establish an experimental oilseed farm of at least one hundred acres to grow additional oilseed crops for analysis as blends for biodiesel. The potential for creating and examining a variety of genetically engineered oilseed crops to blend with biodiesel is significant.

A new biodiesel production facility will be established to process the soybean and other oilseed crop harvest, creating a clean, environmentally friendly fuel with the fuel catalyst Dipetane. Dipetane, a pure hydrocarbon fuel catalyst, is blended at a 1:200 ratio with all liquid hydrocarbon fuels. It has been tested extensively over the past 15 years and has proven to be successful in acting as a catalyst on the hydrocarbon chains in the fuel so that more of the energy is available upon burning. Unlike detergent additives which wash away unburned deposits, Dipetane treatment allows the asphaltines in the fuel to be fully oxidized thus giving an enhanced energy release. Because Dipetane burns more of the fuel, soot and carbon deposits are eliminated. Dipetane treated fuel burns at lower temperature reducing NOx and SOx emissions. It can be added into either the vehicle fuel tank or bulk storage tank and mechanical mixing is not required. Analysis carried out by the Irish Scientific Research Agency show Dipetane to create no extra wear on an metal, rubber, or plastic engine components.

Dipetane is registered with the Environmental Protection Agency (EPA). Gas Technology Services, an approved Australian Gas Association testing laboratory, tested Dipetane treated diesel fuel from April 2000 to November 2000 to assess the capabilities of Dipetane to reduce both fuel consumption and emissions. The following results with the following results:

STAGE 1 – Sampling and on-line analysis of exhaust gases – prior to the addition of Dipetane
STAGE 2 – Sampling and on-line analysis of exhaust gases – after the addition and ongoing use of Dipetane for 8 months.

The fully detailed independent findings from this study show a significant reduction in emissions between Stage 1 and Stage 2. Testing was completed at 0 RPM (idle) and 2000 RPM. The results are summarized as follows:

Emission Type	Maximum % Reduction Achieved
Carbon Dioxide - CO2	23%
Carbon Monoxide - CO	9.50%

Nitrogen Oxides - NOx	35.40%
Sulphur Oxides - SOx	26.80%
Smoke Density - Opacity	61.50%

The planned biodiesel production facility will be established by purchasing an existing abandoned facility to retrofit for biodiesel production or constructing a new facility in the Eastern Arkansas Mississippi River Delta region, most probably Phillips County. The facility will have the capacity to produce up to 30 million gallons of biodiesel per year, doubling the current annual production of such fuel in the United States. With guidance and assistance from the Arkansas Department of Environmental Quality and the Arkansas Department of Economic Development, two separate facilities have already been identified as potential retrofit candidates.

Since 1993, under the Arkansas Brownfields Program, Arkansas Code 8-7 Subchapter 11, the EPA has provided over \$250 million in Brownfields funding for cleanup and economic redevelopment of similar sites. Redevelopment of such a facility will not only serve to prevent further environmental damage to the site but pump economic life back into this distressed area. An engineering study for the retrofitting of an existing abandoned plant will be conducted to determine the feasibility of accomplishing such a project. The outcomes of this study will not only serve as a guide for fulfillment, but will also have implications for similar locations nationwide.

In preparation for taking the facility online, marketing research will be conducted in conjunction with other biodiesel manufacturers and agricultural engineers nationwide, leading to the composition of a marketing plan written to encompass not only the sale of biodiesel but the sale of all byproducts produced during the manufacturing process. All available information on current legislation, governmental incentives, benefits, contracts, permits, legal issues and funding opportunities pertaining to the production of biodiesel will be researched. Industry accepted practices related to site acquisition, machinery equipment specification and sourcing, storage and handling equipment, and laboratory equipment and supplies will be determined and evaluated throughout this process.

RELEVANCE TO FUNDING PRIORITIES

Arkansas is a prime location for the construction of a biodiesel facility, with all of the necessary components readily available. The feasibility of producing biodiesel in Arkansas is greatly enhanced by the availability of raw products necessary to produce biodiesel, the availability of labor, and the accessibility of many forms of transportation. Long-term poverty and job deterioration in the Delta region, specifically Phillips County where the poverty level was 32.7% in 1999, coupled with its rich array of renewable resources and agricultural knowledge, makes this a particularly interesting and necessary location for initiating economic and community development.

Arkansas ranks ninth in the United States for the production of soybeans with the vast majority of the crops being grown in the eastern Delta region. More than 6,800 Arkansas soybean farmers produce about 110 million bushels on 3.5 million acres of farmland. 33% of the

annual production is processed in Arkansas into raw components leaving the remaining non-crushed beans to be shipped to port areas. The eastern region of Arkansas is well served by all modes of transportation, including ports and airports, pipelines, rail and trucking. Arkansas is fortunate to have the soybean producing counties on or close to three major rivers to facilitate transportation down to New Orleans, La.

Due to these significant challenges and opportunities, a group of proven leaders in the construction, manufacturing, marketing and testing of biodiesel have joined together to initiate this project. They have identified existing abandoned facilities for potential retrofit to methyl ester biodiesel production from vegetable oil that will now only allow for low cost capital development, but also potentially serve as a prototype for hundreds of similar locations across the United States. It is based on published academic reports and extends those concepts into an integrated, continuous high throughput process.

The types of equipment planned for use, particularly the use of a continuous extraction column and early removal of the excess alcohol, are especially innovative. The ability to operate in either batch or continuous mode will permit the facility to maximize production even when equipment is temporarily removed from service for maintenance. Specific development needs include validation of reaction kinetics, validation of separation processes, validation of purification methods, and impact and recovery from process upsets.

Waves of legislation and air quality management agreements established in 1999 and continuing to evolve today is significantly increasing the demand for biodiesel throughout the United States. Published estimates suggest that at least five billion gallons of biodiesel fuel will be needed by 2012. With current United States production of clean biodiesel estimated at 15 million gallons this year, the addition of a 30 million biodiesel facility in Eastern Arkansas would increase biodiesel production in the United States by over 200%.

Initial production suggests that adding the fuel catalyst, Dipetane, to biodiesel shows promising effects for decreasing traditional biodiesel's NOx emissions. Establishing credible, scientific documentation of the effects of a biodiesel blended with Dipetane may lead to major public policy and industry standard changes, answering the pressing problem of NOx facing end-users of biodiesel while reducing all other emissions and increasing fuel mileage. The creation of an experimental farm to grow additional oilseed crops and potentially genetically engineer those crops for use with Dipetane in biodiesel also adds a significant research component to our efforts. The research associated with this production could expand the public policy implications, determining the most effective and efficient means of creating clean biodiesel. Additionally, findings will increase the demand and opportunity for farmers nationwide to produce oilseed products for the production of clean biodiesel. For this project alone, over 1 million bushels of soybeans will be required to fulfill the planned facility's 30 million gallon production capacity. Some 1,500 square miles in the underutilized Eastern Arkansas Mississippi Delta region will be farmed, not including the additional development value surrounding lands will achieve. The formation of a biodiesel production facility in this region will serve as a catalyst for development in areas rich in untapped resources, starving for opportunities to rise above third world economic levels.

STATEMENT OF WORK PROJECT LEADERSHIP

Combustion Technologies, LLC, an Arkansas Limited Liability Company, will lead the collaboration of the Arkansas Delta Biodiesel Research Project in coordinating the various phases of planned research and production. Each partner will update Combustion Technologies regularly on project objective progress through a series of meetings, interactions, and written reports. The company will supply the Dipetane necessary for clean biodiesel production and recruit and review proposals of the different partners necessary to see the project to successful completion. Additionally, Combustion Technologies may provide financing where necessary, possible and appropriate to support initial phases of the project.

ENGINEERING/ CONSTRUCTION ANALYSIS

Lurgi PSI is a leading provider of engineering services and plant construction in the fields of renewable resources, food processing, and chemicals on a turnkey basis. Lurgi has been enlisted to provide the design, procurement, and construction of the biodiesel facility in Eastern Arkansas if the study proves the facility to be feasible. The pre-engineering study will include project development, process design, detailed design, equipment procurement, general contracting specialty fabrication, cost accounting and start-up assistance.

Preliminary engineering design for the feasibility study would produce the following information:

- Process flow diagrams with material balance
- Preliminary equipment specifications and guide drawings
- Preliminary instrument list and specifications
- Preliminary piping and insulation specifications
- Preliminary project site map and equipment layout
- Preliminary Civil Structural design criteria
- Preliminary control system specification and architecture
- Preliminary definition of site utility and site infrastructure
- Preliminary definition of environmental permit requirements

The new production facility would manufacture methyl esters from soybean oil. The facilities proposed by Lurgi PSI are:

Deacidification of Degummed Soybean Oil	104,000 metric tons/yr
Transesterification of Treated Soy Oil	100,000 metric tons/yr
Methyl Ester Drying	100,000 metric tons/yr
Glycerin Water Pretreatment	30,000 metric tons/yr
Glycerin Water Evaporation	12,500 metric tons/yr
Pharmaceutical Grade Glycerin	9,300 metric tons/yr

SITE DEVELOPMENT

Helena-West Helena/Phillips County Port Authority operates the United State's largest new slackwater facility, sixty-five miles south of Memphis, TN, at mile marker 652 on the Mississippi River. Four and one half miles of slackwater frontage and over one mile of fast water

frontage is included in Helena Harbor's 4,000 acre 26 million dollar industrial park. This ideal inland harbor has turning areas and fleeting facilities that are two and one fourth miles long, 300 feet wide and nine feet deep. It has full utilities, interstate highway access, a major oil pipeline, and the industrial park is serviced by rail. The Port Authority has all of the facilities necessary for operation of grain storage, grain processing, and biodiesel manufacture. The Port Authority has been a moving force in bringing the biodiesel potential to the attention of the area agriculturists.

The Port Authority has taken the lead in providing the site for the biodiesel plant and will make available 20 acres of land for the development of a plant in the slackwater facility.

PRODUCT DEVELOPMENT/FARMERS COOPERATIVE FORMATION

Delta Regional Energy Development Group, LLC, is a public benefit corporation formed under Arkansas Act 1147 of 1993, the Nonprofit Corporation Act. The principal purpose of the company is to create interest in, and attract to the Delta areas in Arkansas and surrounding states, economic growth which will have a value-added impact upon the agricultural economy. This would include the feasibility of producer cooperatives, ethanol and biodiesel production, additional grain storage and processing facilities and additional crops for increased production.

The Group will provide technical support and aid in the fundraising processes related to environmental improvements and agricultural research, supporting the development of the Farmer's Blend Cooperative, a group of Delta regional farmers collaborating to grow oilseed crops for the production of biodiesel. The formation of the Farmers Blenders Cooperative will give rise to the eventual construction of the grain storage terminal and soybean oil extrusion plant.

MARKET ANALYSIS

An extensive market analysis will be performed by West Central Soy, a seventy-five year old Iowa-based corporation that has been producing and marketing biodiesel since 1996. In that time, West Central Soy has developed a nationwide network of biodiesel distribution that is currently utilized to channel their present biodiesel production capacity of 12 million gallons into the diesel market. They market biodiesel production from other manufacturers to meet demand in various regions of the country and exports to several countries. Two West Central Soy Representatives are working closely with the petroleum industry to develop an extended sales force that provides biodiesel fuel blends to the diesel fuel consumer. This biodiesel marketing model developed by West Central is being employed successfully with plans to expand the marketing to meet growing demand.

West Central Soy will utilize this distribution network to assist the Arkansas biodiesel facility to provide a market outlet for their production. The company will perform a market analysis and provide support and research pertaining to marketing and sales, market development, distribution and logistics, risk management, transaction processing, and byproduct marketing. West Central Soy will provide the biodiesel production technology to ensure reliable supply of high quality biodiesel.

TESTING AND RESEARCH

Southwest Research Institute in San Antonio, Texas, a nationally recognized, independent nonprofit corporation will research the addition of a proven fuel catalyst, Dipetane, to biodiesel in order to reduce the current problem of an increase in NOx during the combustion of biodiesel. This will aid in the development of a new product, which will address the remaining negative facing the biodiesel industry, and enhance the economic viability of biodiesel usage. In addition to biodiesel production, the fuel catalyst, Dipetane, will also be manufactured on-site. The fuel catalyst is mixed in a 1:200 ratio with a fossil fuel based carrier oil. Southwest Research Institute will be researching the possibility of using biodiesel as the carrier oil. This possibility opens up a wide range of interactions between the biodiesel industry and the petrochemical infrastructure.

Southwest Research Institute is not affiliated with any government agency, educational institution, or corporate entity, nor does it endorse products or services. The Institute will conduct an emissions screening test of Dipetane-treated fuels against baseline or reference fuels composed of biodiesel. The program of tests may include the following:

- Baseline Fuel (Fuel R)
- Dipetane Treated Baseline Fuel (Fuel C1)
- Dipetane + Baseline Fuel as 80% fuel, 20% biofuel (B-20) (Fuel C1)
- Dipetane Treated B-20 (Fuel C3).

Southwest Research Institute has proposed that these fuels be run in the order of RRR, C1C1C1 on Day 1, and C2C2C2 C3C3C3 on Day 2, where each symbol ("R") represents a "hot-start transient run" for HC, C, NOx, Co2 and PM over a period of two days of testing. Fuel economy in terms of lb/hp-hr will be established by carbon balance.

A hot-start transient run is essentially a process defined in the CFR Title 40, Part 86, Subpart N for measuring regulated emissions from a heavy duty diesel engine. Southwest Research routinely runs this procedure as part of our work for EPA and engine OEM, as well as others with the need for emission data. The expected result of this testing will be the significant reduction of NOx in biodiesel treated with "Dipetane." This expectation is based upon the results of extensive testing of diesel treated with "Dipetane." Southwest Research will also do a comparison of biodiesel and carrier oils, such as Telura 619, to determine the feasibility of using biodiesel instead of fossil fuel based carrier oils.

RETROFIT ANALYSIS

Chemical Engineer, Donald Malcolm, will provide expertise in the determining the feasibility of retrofitting an existing abandoned chemical facility in Helena, Arkansas, Cedar Chemical Plant. His experience as the former Senior Production Engineer at the offline facility (both design and implementation experience) will make him an invaluable part of the team. It is anticipated that an existing facility will require significantly less design engineering and construction and can more quickly be brought to start-up than building a new facility from the ground up. This creative and imaginative retrofitting analysis will demonstrate a low cost approach to the production of biodiesel. After initial laboratory testing, the retrofitting process

will be adapted to a plant trial, eventually scaling-up to commercial production. The Cedar Chemical Plant is unique in that it can be operated either continuously or in a batch mode. This dual production capability will allow for experimental innovations to validate new concepts as they are devised, without impacting standard daily production.

MONITORING AND EVALUATION

Combustion Technologies will lead partners in an on-going monitoring and evaluation of the project's feasibility and progress. Initial expectations suggest a 9-12 month timeline for securing site acquisition, determining retrofit capabilities; conducting market analysis, testing products, and establishing the agricultural development schedules. Combustion Technologies will conduct regular meetings and site visits with partners, comparing accomplishments of the activities related to each project objective in addition to any reporting requirements established by funders.

Assisting in this task will be the International accounting and financial consulting firm of Moore, Stephens & Frost, which is also known as MSF Financial Group. It will provide ongoing research and evaluation assistance. The seventy year old Little Rock law firm of Eichenbaum, Liles & Heister, p.a., will provide all legal research and technical assistance that will be required. And the accounting firm of Johnson & Associates, p.a., which for more than thirty-five years has represented industrial, agricultural, and mining clients, will provide audit and accounting services for the project.

At the end of the proposed project timeline, a written document with the following table of contents will be produced by the partnership to discuss the challenges and successes of the study and recommendations for the continuation of the project.

- I. Introduction and Scope of Work
- II. Engineering Study
 - A. Retrofitting of Cedar Chemical Plant
 - B. Construction Plan for New Biodiesel Facility
- III. Biodiesel Research and Development
 - A. New Product Development – Biodiesel/Fuel catalyst results
 - B. Carrier Oil Study
- IV. Demographic and Site Location Analysis
- V. Marketing Analysis
- VI. Legal and Legislation Study
 - A. Legal Structure of organization
 - B. Biodiesel Legislation and Incentives
- VII. Evaluation
 - A. Summary and Conclusions
 - B. Recommendations

This document will provide funders and potential investors with an understanding of the project's strengths, weaknesses, and public policy implications, detailing the approach for remedying challenges and enhancing production to ensure maximum environmental improvements and full operational capacity.

PART II. STATEMENT OF CAPABILITIES

❖ COMBUSTION TECHNOLOGIES, LLC

John H. Haley and his wife Cynthia are the principals of Combustion Technologies, LLC. Cynthia is a UAMS graduate, a licensed realtor, and a managing director of Combustion Technologies. Haley has held directorships in a number of Arkansas firms, including garment, wood products, and shoe manufacturing companies, and telephone and telecommunications companies. Some of the companies for whom he has served as counsel and director have grown from start up to over \$100,000,000 in annual sales. Haley is also a tax attorney and an industrial real estate developer. He has taught at the University of Arkansas Little Rock and the Arkansas Law School, and has been lead attorney in some of the great landmark cases of the past four decades. He is listed in most Who's Who publications and has the highest professional rating.

Combustion Technologies, LLC is the distributor of Dipetane, a fuel catalyst developed and long used in Ireland. It is also active in development of a simple engine using Nitinol bands in conjunction with heat from natural sources. The objective is to provide the means of pumping water, refrigerating foods, and meeting other needs in Third World countries.

The advisory board assists Combustion Technologies in the challenge of competing in the very competitive fuel industry. They provide guidance and feedback about the goals, objectives, and direction of this endeavor, enhancing the management team to bring about sound business knowledge and expertise. Our advisory board members have been selected based upon their business acumen, ability to create new business, and their overall knowledge and influence in the business world.

PRESENT ADVISORS

- John S. Haley, Senior Vice President for Acquisitions, Alltel, fifth largest Independent telephone and cellular company in the United States
- David C. Haley, Partner, HBK Holdings, Dallas, Texas, investment firm managing 3.5 billion dollars, former public securities attorney
- Drexel Martin, retired Vice President, Shell Oil, Houston, Texas
- Bob Pond VP Marketing, ORIX USA Corporation
- Richard McPherson Energy Technology and Development Consultant
- Morris Cranmer, PhD, Chemist and Toxicologist, Cranmer and Associates, former Director of the National Center for Toxicological Research
- Asa Morton, Owner, American Interplex Laboratories
- Steve Sanders, PhD, Graduate MIT, Plasma Physics, Owner NATCO

❖ LURGI PSI www.lurgipsi.com

Lurgi PSI is an integral part of an international engineering and technology group that has developed biodiesel and similar oleochemical projects around the world for several decades. They have an outstanding development record in terms of numbers of plants, production capacity, variety of feedstocks, and by-products. Lurgi biodiesel plants are a proven process with an operational history.

Lurgi PSI is a world leader in several specialized fields of engineering and construction due to its superior technology, innovation, and ability to meet the needs of the client in rapidly evolving industries. The vast resources of technology available through our relationship with Lurgi PSI will be a valuable asset in the feasibility study process. (See attached resumes for Josef Haeupl and Ray Jones)

❖ **DONALD W. MALCOLM** – dmalcolm@cox-internet.com

Chemical Engineer Donald Malcolm will provide expertise in the feasibility of retrofitting the Cedar Chemical Plant in Helena, Arkansas. If negotiations for the Cedar Chemical facility prove to be successful, his experience as Senior Production Engineer at the plant with both design and implementation experience will make him an invaluable part of the team. An existing facility will require significantly less design engineering and construction and can more quickly be brought to start-up. The creative and imaginative retrofitting of an existing plant will serve to demonstrate a low cost approach to the production of biodiesel. The feasibility study will allow for laboratory and initial process development. After initial laboratory testing, the process would be readily adapted to a plant trial with eventual scale-up to commercial production. The Cedar Chemical Plant is unique in that it can be operated either continuously or in a batch mode. This concept would allow for innovations to be tried on a plant scale to validate new concepts as they are devised. (See attached resume)

❖ **HELENA-WEST HELENA/PHILLIPS COUNTY PORT AUTHORITY**

To encourage the development of a new biodiesel facility in Phillips County, the Port Authority would agree make available its infrastructure and would contribute the use of land for construction of storage, processing and transportation facilities. In addition to all of these necessary components of the completed project, its sites would also be available as a biodiesel manufacturing plant location in the event that the retrofitting of Cedar Chemical plant becomes impractical.

❖ **DELTA REGIONAL ENERGY DEVELOPMENT GROUP**

Delta Regional Energy Development Group, Inc. is a Non-profit Arkansas Corporation formed to promote biomass material processing and manufacture, and to assist in the formation of local cooperatives of farmers which would provide the storage and processing facilities for these industries. Its Board of Directors consists of many of the leading farmers in the Phillips County region, as well as representatives of Combustion Technologies and the Helena/West Helena Phillips County Port Authority. These farmers raise soybeans, cotton, corn, wheat, grain sorghum, and milo.

❖ **WEST CENTRAL SOY** www.west-centralsoy.com

West Central was incorporated in 1933 in Ralston, Iowa, which is still its headquarters. They have been adding value to member soybeans since the 1940's. Employing 250 people, West Central has annual sales of \$250 million. 27 million bushels of soy oil are processed into alkyl esters annually by West Central. Some of West Central Soy's valued customers include the US military, US Department of Defense, National Parks, MFA Oil, Walmart, and hundreds of B20 fleets across the United States.

GARY HAER – Biodiesel Sales and Marketing Director, Vice President National Biodiesel Board. Has increased sales from 0 to 2 million gallons with projected sales in 2003 of 5-6 million gallons.

MYRON DANZER – Biodiesel Plant Manager, National Biodiesel Board
National Accreditation Committee

NILE RAMSBOTTOM – Executive Vice President Soy Division

❖ **SOUTHWEST RESEARCH INSTITUTE** www.swri.org

Located on 1200 acres in San Antonio, Texas, Southwest Research Institute has state-of-the-art equipment and facilities. Southwest Research Institute performs applied contract research and development and encourages technology transfer. Almost two million square feet of laboratories, offices and test facilities support work on almost 1500 client projects each year. Southwest Research has a wide range of technical competencies and breadth. Its 2800 staff members in 11 technical divisions have expertise in such areas as chemistry, space sciences, nondestructive evaluation, automation, engine design, mechanical engineering, electronics and more. The Institute can assemble a multidisciplinary team of experts required by any technical project. The Fuels Analysis Laboratory in the Emissions Research Division will be conducting the emissions testing on Dipetane treated biodiesel. This Division offers virtually every standard industry test.

❖ **UNIVERSITY OF ARKANSAS DIVISION OF AGRICULTURE** www.arkagriculture.org

The mission of the University of Arkansas Division of Agriculture is to provide research-based information to help Arkansans improve their economic well-being and the quality of their lives. They offer advice on a number of subjects related to specialty enterprises including, planning, enterprise budgets, production, marketing and value added products.

❖ **ARKANSAS DEPARTMENT OF ECONOMIC DEVELOPMENT** www.aedc.state.ar.us

The Arkansas Department of Economic Development is committed to providing a team of business development professionals to bring better jobs to the people of Arkansas. The Community Development Section focuses on technology in the energy field addressing alternative sources of power and fuels and will offer support in the following areas:

- Building and Sites
- Financing
- Incentives
- Export assistance
- Business development
- Technology assistance
- Permits

PROFESSIONAL PROFILE

JOSEF HAEUPL

EXPERIENCE

Director of Technology and Engineering

- Director Technology, Lurgi PSI, Memphis, TN and Lurgi Life Sciences, Bad Bubendorf, Switzerland. Business development and front-end engineering including feasibility studies and business planning.

Selected Projects:

Feasibility, conceptual and preliminary engineering for a BioDiesel Production Facility at Southern States Power Company, Riverside CA. Various studies to evaluate and compare alternative feedstock and process routes applicable in the BioDiesel Industry. Usable feed materials include vegetable oils, beef tallow, greases (yellow grease, brown grease), recycled fryer oils and Soapstock from oil refining.

- Director Technology, Pharmaplan GmbH, Bad Homburg, Germany and Pharmaplan N.A., Philadelphia, PA Focussing on business development and front-end engineering.

Selected Projects:

Conceptual through detailed engineering for a GMP compliant API Technikum at Byk Gulden, Singen, Germany. Feasibility study for a GMP compliant API Manufacturing facility at Transopharm, Hamburg, Germany.

- Manager of Engineering, Lonzagroup, Fair Lawn, NJ. Head of engineering for all of Lonza's sites in the US, including Lonza's Oleochemical sites in Painesville, OH, Williamsport, PA, and Mapleton, IL. Activities included feasibility evaluation, engineering, procurement, construction supervision as well as project management and start-up services.

Selected Projects:

Fatty Acid Distillation System in Painesville, OH (1998) Various de-bottlenecking projects in Painesville, OH (1995-1997), including

PROFESSIONAL PROFILE

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EXPERIENCE (cont.)

JOSEF HAEUPL

Hydrogenation, Fatty Acid Splitting and Glycerin Processing. Expansion of Lonza's Ester Facility in Williamsport, PA (1997), from feasibility study to implementation, including Esterification, Ethoxylation, Spray Drying and Packaging systems. Batch Distillation System for Alcohols, Fatty Acids and Amines in Mapleton, IL (1988) Crystalline Sorbitol Production Plant in Mapleton, IL (1985) Responsible for in-house process development, design, installation and start-up of the facility. Site Development Planning for all Lonza sites in the US. Review and alignment of all site related activities with the corporate business plan for the Lonza Group's sites, including Painesville OH, Williamsport PA, Mapleton IL as well as Bayport TX, Conshohocken PA, Los Angeles CA and Long Beach CA.

EDUCATION

MBA in Management, Fairleigh Dickinson University, College of Business Administration, Teaneck, NJ

Engineering Certificate, Dipl.-Ing. (FH) in Mechanical Engineering, State College Aalen, Aalen, Germany

PROFESSIONAL AFFILIATION

American Oil Chemist's Society (AOCS)
International Society of Pharmaceutical Engineering (ISPE)
German Association of Engineers (VDI- Verein Deutscher Ingenieure)

PROFESSIONAL PROFILE

RAY JONES, P.E.

EXPERIENCE

Project Management

- Managed multiple plant projects for a major chemical corporation from concept through design and construction.
- Project Manager in the Corporate Engineering Division for a specialty chemical corporation. Managed capital projects from conception to mechanical completion and start-up. Responsibilities included capital cost and schedule control. Working relationships were maintained with contractors, manufacturing personnel, customers, and regulatory agency personnel.
- Senior Process Engineer, Interim QA/QC Supervisor, and an Engineering Supervisor for a specialty chemical corporation. Managed capital projects and small group of engineers and draftsmen.
- Project Engineer, Maintenance Engineer, Area Process Engineer, Process Engineer, Senior Process Engineer, and Production Supervisor for a specialty chemical company. Managed capital projects, scheduled maintenance, designed process improvements, and managed up to 27 employees in manufacturing of solid product. Processes included handling of solids, liquids, and gases.
- Completed a \$54 million capital expansion which included a new 200,000 lb/hr boiler, plus the following new process facilities:
 - 208,000 SCFH hydrogen plant
 - 30 million pound per year polymer additives plant
 - Pre-treatment process for Furfural
 - A Tetrahydrofuran production facility
 - A wastewater stripping and treatment facility
 - Miscellaneous plant utility system

PROFESSIONAL PROFILE

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RAY JONES, P.E.

EXPERIENCE

- Designed and installed facilities for production of 4 million pounds per year of paper sizing agent for proprietary customer. \$3.3 million capital. Later debottlenecked production to 7.3 million pounds for \$1.4 million capital.
- Designed and installed facilities for production for low toxicity pesticide for livestock application for proprietary customer. \$3.4 million capital. Included toxic fume incinerator.
- Designed and constructed semi-works facility for manufacture of proprietary chemical for a specialty chemical facility. Final product, raw materials and intermediates control required extraordinary containment measures due to extreme toxicity. Manufactured the purest product customer had seen during technology development.
- Designed and constructed facilities using existing equipment for toll manufacture of brominated specialty chemical for a specialty chemical facility.
- Designed and constructed facilities for toll purification of organic agricultural chemical for Rhone Poulenc. Removed impurity allowing product to meet customer specifications.
- Designed and constructed 600 gpm industrial wastewater treatment facility for widely variable plant wastewater quality. System featured unique design for pH control. Final effluent disposal was by underground injection well.
- Designed and constructed facilities for toll manufacture or proprietary agricultural chemical for a specialty chemical company. Designed for 12,000 pounds per day and produced over 16,000 pounds per day of product.
- Designed and constructed facilities using existing equipment for toll manufacture or proprietary organic chemical for a specialty chemical company. Process required safe unloading and handling of organic isocyanate compound and drying of final powdered product under intense vacuum.

PROFESSIONAL PROFILE

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RAY JONES, P.E.

EXPERIENCE

- Managed \$35 million environmental remediation project covering pond closures, landfill closures, and soils and groundwater remediation. Project included above ground treatment facilities.

EDUCATION

Bachelor of Science in Chemical Engineering
University of Arkansas
Fayetteville, Arkansas

TRAINING

Professional Engineers License
State of Tennessee

Fundamentals of Successful Project Management
Memphis

Conflict Resolution Seminar
Memphis

Questimate Cost Estimate
Bethesda

OSHA 40 Hour Training
Memphis

NIOSH 40 Hour Course
Philadelphia

Economic Principles
St. Louis

Donald W. Malcolm
312 North 7th St.
West Helena, AR 72390
Home Phone (870) 572-9462
Email: dmalcolm@cox-internet.com

SUMMARY

Highly skilled, flexible and motivated chemical engineer with more than 20 years of extensive operations, engineering, and supervisory experience in world-class chemical facilities. Team player with broad experience in both continuous and batch processes. Extensive experience in environmental control, quality improvement, distillation, fluid flow, heat transfer, metallurgy and mass & material balances. Highly skilled in process definition, optimization and improvement methods focused on safety, environmental compliance and operability. Highly developed cost control and budgeting skills targeted toward maximum return on investment. Intimate knowledge of injury management and prevention processes. Skilled in both oral and written communications as well as in the use of PC's for productivity enhancement and business analysis (AutoCad LT, Visio, MS Office, Lotus).

OBJECTIVE

To obtain an interesting and challenging engineering position in the chemical manufacturing industry allowing me to use my skills in chemical process improvement, plant operations, design and problem solving and to deepen and broaden my experience base. To afford the opportunity to further develop my skills in business evaluation and development.

WORK HISTORY

Plant Engineer, Cypress Chemical Co., Helena, AR (2002-Present)

Managed capital projects in excess of \$500K. Designed and managed on time and in budget installation of a new sludge handling process. Developed economics for conversion of plant to direct purchase of natural gas and implemented conversion, including negotiation of gas purchase and transportation contracts. Developed and implemented detailed raw materials monitoring process. Responsible for coordination with consultants and contractors for plant storm water monitoring and air permit testing. Identified and developed product treatment process to reduce odor and dust.

Senior Production Engineer, Cedar Chemical Corp., West Helena, AR (2000-2002)

Organizational realignment during restructuring that placed focus on operational problem solving and troubleshooting skills. Oversee the activities of three process engineers to establish priorities and coordinate engineering manpower. Coordinate turnarounds between custom manufacturing projects, monitor production yields and identify and implement improvement opportunities, develop and review P&I diagrams, write and teach operating procedures. Designed and implemented change from batch process to semi-continuous process resulting in 80% increase in throughput at no capital expense. Identified process changes to a 4-step batch process resulting in an increase in throughput of 30% with minor capital requirements. Designed and implemented an impurities purge system saving approximately \$60K over 120 day campaign with more consistent control of product quality.

Production Manager, Cedar Chemical Corp., West Helena, AR (1999-2000)

Responsible for the day-to-day operations of three chemical process units and packaging warehouse including troubleshooting and engineering improvements. Supervise a team of 38 operators, 4 shift supervisors, a packaging supervisor and one Production Superintendent. Successfully managed process start-ups for 6 custom projects in a 1 year span. Work with process engineers to finalize process designs for the custom units. Key client contact for custom projects. Work extensively with support groups to improve the physical plant. Coordinate with marketing and logistics to insure raw material and product availability. Recognized "change agent." Initiated, chaired, and championed multiple problem solving teams to address key operational and management concerns including operator skills progression and product quality improvements. Manage personnel development in area, identifying needs and developmental opportunities for both supervisors and operators.

Sr. Process Engineer, Cedar Chemical Corp., West Helena, AR (1997-1999)

Responsible for all process engineering projects in two custom batch chemical production units. Successfully managed start-up and operation of 3 custom projects resulting in improved yields (up to 30%), decreased rework and lower costs. Work closely with client representatives in the development, start-up, and operation of custom projects. Identify, develop, and implement process modifications for reducing costs, increasing efficiencies, and improving quality. Conduct custom process reviews to analyze "fit" and operational economics; develop initial process design. Conduct major incident investigations including root cause analysis, corrective action recommendations, and coordinate follow-up. Responsible for the development, communication and document control of operating procedures for units. Conduct hazard reviews, with documentation, of all process changes. Identified key control point in unit operations resulting in a 1/3 reduction in manufacturing costs with a 20% increase in production. Developed and implemented manufacturing cost model to aid in real time decision making. Directed custom process start-up in record time with improved performance. Negotiated raw material and conversion yields with client.

Owner/President, White River Investments, Inc., Rose Hill, KS (1995-1997)

Created holding corporation to purchase and operate a retail dry cleaning business. Operated and managed multi-location business employing 14. Handled all day-to-day functions of business including bookkeeping, advertising, production, environmental control, customer service and maintenance. Turned business from questionable profitability to solid financial performance. Developed key client relationships resulting in increased repeat business by exemplary customer service. Sold business at a substantial return.

Production Superintendent, Vulcan Chemicals, Wichita, (1991-1995)

Managed area of four production units with 42 operators, 5 shift supervisors, 3 day supervisors and an engineer. Responsible for production volumes, quality and cost control. Responsible for planning and implementation of OSHA process safety requirements, ISO 9000 certification of all products, environmental compliance, and TQM initiatives. Our department was awarded President's Quality award two years in a row. Completed OSHA PSM activities ahead of schedule. Participant on inter-company team with major customer to identify needs and provide support. Department attained and maintained ISO certification on all products. Performed day-to-day process troubleshooting. Developed comprehensive corrosion control program leading to an annual cost reduction of \$1MM. Led plant team for employee recognition and safety performance. Developed process to augment safety performance in addition to plant safety process. Conducted business analysis of process unit

resulting in decision to cease that operation. Department established numerous all-time production records. Developed, implemented and monitored annual budgets of approximately \$30MM.

Operations Manager, American MicroTrace Corp., Fairbury, NE (1990-1991)

Site manager for small agricultural micronutrients production facility. Full P&L responsibility for site employing 28 personnel with an annual budget of \$10MM. Developed and implemented effective safety process. Effectively reduced incidence and severity of injuries by instituting management controls. Developed and implemented effective management process by defining responsibilities and instituting controls. Instituted use of SPC to begin definition of process capabilities.

Production Superintendent, Vulcan Chemicals, Geismar, LA (1978-1990)

Responsible for all facets of production, safety, and maintenance. Supervised departments of up to 22 operators, 5 shift supervisors and 2 day foremen with annual budgets up to \$25MM. Departments routinely established production, safety, and on-stream time records. Managed interdisciplinary team to debottleneck process and increase capacity by 50%. Developed fundamental cost projection methods for processes. Member of multi-site team which developed corporate environmental release prevention policy. Founding member of plant Quality Council. Created inter-company communications team to coordinate pipelined product movements between four different companies. Company representative for international technical group, presented paper at international conference. Wrote and taught operating procedures.

EDUCATION

1977	B. Ch. E., Georgia Institute of Technology
1977	EIT Certified – State of Georgia
1987	Deming Quality Process, Hertz Group
1995	Butler County Community College, misc. course work

BUDGET

Statement of Work	Cost	Contribution (in-kind)
Engineering Study		
A. Lurgi PSI (detail attached)	\$200,000	\$100,000
B. Don Malcolm (detail attached)	\$18,500	50,000
Research Study		
Southwest Research Institute (detail attached)	25,000	0
Combustion Technologies 2000gal. Dipetane @\$10 (market price)	20,000	20,000
University of Arkansas Experimental Farm	0	0
Site Location New Biodiesel facility/ Retrofit of Plant		
Helena Port Authority 20acre Syr. Lease	200,000	200,000
Cedar Chemical Retrofit	100,000	0
Arkansas Department of Economic Development	0	0
Marketing Study		
West Central Soy	75,000	50,000
Arkansas Department of Economic Dev.	0	0
Legislative/Legal Research		
Moore, Stephens and Frost (detail attached)	48,000	18,000
Eichenbaum Law Firm (detail attached)	120,000	50,000
Support Services		
Johnson and Associates, CPA (detail attached)	78,000	28,000
Combustion Technologies, LLC (detail attached)	375,000	275,000
TOTAL COSTS	\$1,759,500	\$791,000
TOTAL GRANT REQUESTED	\$968,500	

NOTE: The project Term is five calendar Quarters, commencing August 2003, or when funded, whichever is later. The tests, pre-engineering studies, initial retrofit expense, site location, and research and planning will be completed in the first two quarters. The remaining expense will be incurred rateably over the life of the project.

BUDGET: LEGISLATION/LEGAL RESEARCH

MOORE, STEPHENS & FROST, P.A., C.P.A.s TOTAL \$48,000

Tom Gibbons of the Little Rock, Arkansas, office will be in charge. He is a senior partner in the firm. The firm will assist in identifying and quantifying the incentives offered by states and the federal government for the use of biodiesel products. Gibbons' billing rate is \$250 an hour, and he will be aided by assistants whose rates range from \$80 an hour to \$175 an hour. Their estimate of time required is 300 hours, at a blended rate of \$160 an hour.

EICHENBAUM, LILES & HEISTER, P.A. ATTORNEYS TOTAL \$120,000

Eichenbaum Firm is a seventy year old Little Rock law firm specializing in commercial and financial matters. Charles McDaniel, attorney and C.P.A., will be in charge of the project. The firm will identify and quantify the incentives offered by state and federal agencies for the use of biodiesel products specifically, and for the use of products which decrease emissions, including biodiesel. The firm will also research the permits required for biodiesel plant installation and production, transportation of biodiesel by barge and pipeline, and qualification of the biodiesel facility for available tax credits and subsidies. The firm will form the farmers' cooperative which will produce the feedstock and operate the experiment farm. McDaniel's billing rate is \$200 an hour. Other lawyers and paralegals who will assist him have billing rates ranging from \$150 an hour to \$60 an hour. The firm estimates that the time required will be 800 hours at a blended rate of \$150 an hour.

BUDGET: SUPPORT SERVICES

JOHNSON & ASSOCIATES, C.P.A.s TOTAL \$78,000

The accounting firm of Johnson & Associates, of Little Rock, Arkansas, will provide accounting and audit services for the project out of its Little Rock, Arkansas, office. It will also make application for all permits and authorizations, and will file all reports required or needed. Michael B. Johnson of that office will be in charge. He is a senior partner in the firm. His billing rate is \$175 an hour. Others in the firm that will be working on this project have billing rates ranging from \$45 an hour to \$140 an hour. The firm estimates that the time required will be 650 hours at a blended rate of \$120 an hour.

COMBUSTION TECHNOLOGIES, LLC TOTAL \$275,000

The Applicant Combustion Technologies will provide the Project Director, who will be John Haley, President, and whose billing rate is \$250 an hour, his assistant Cynthia Haley, Vice President, whose charge is \$50 an hour, and a secretary to be selected and who will be paid a salary of \$5,000 per quarter. Travel is estimated at \$1,000 per month, supplies and miscellaneous expenses at \$1,000 per month, and rent of office space at \$1,333 a month. Haley estimates that Cynthia will be working full time on the project for five quarters, and that he will be devoting about 1,000 hours to the project over that same period of time. The total cost will be \$75,000 per quarter for the five quarters of the project duration.

	<u>1st Quarter</u>	<u>2nd Qtr.</u>	<u>3rd Qtr.</u>	<u>4th Qtr.</u>	<u>5th Qtr.</u>
Project Director	50,000	50,000	50,000	50,000	50,000
Rent	4,000	4,000	4,000	4,000	4,000
Assistant	10,000	10,000	10,000	10,000	10,000
Secretarial	5,000	5,000	5,000	5,000	5,000
Travel	3,000	3,000	3,000	3,000	3,000
Supplies, Misc.	3,000	3,000	3,000	3,000	3,000
Total	75,000	75,000	75,000	75,000	75,000

BUDGET: RESEARCH

SOUTHWEST RESEARCH INSTITUTE TOTAL \$25,000

The program of tests may include the following:

- Baseline Fuel (Fuel R)
- Dipetane Treated Baseline Fuel (Fuel C1)
- Dipetane + Baseline Fuel as 80% fuel, 20% biofuel (B-20) (Fuel C1)
- Dipetane Treated B-20 (Fuel C3).

Southwest Research Institute has proposed that these fuels be run in the order of RRR, C1C1C1 on Day 1, and C2C2C2 C3C3C3 on Day 2, where each symbol ("R") represents a "hot-start transient run" for HC, C), NOx, Co2 and PM over a period of two days of testing. Fuel economy in terms of lb/hp-hr will be established by carbon balance.

BUDGET: ENGINEERING

LURGI PSI TOTAL \$200,000

Lurgi PSI will do the pre-engineering report to include the following:

- Process flow diagrams with material balance
- Preliminary equipment specifications and guide drawings
- Preliminary instrument list and specifications
- Preliminary piping and insulation specifications
- Preliminary project site map and equipment layout
- Preliminary Civil Structural design criteria
- Preliminary control system specification and architecture
- Preliminary definition of site utility and site infrastructure
- Preliminary definition of environmental permit requirements

DON MALCOLM TOTAL \$518,500

Biodiesel Development Budget DON MALCOLM

Laboratory and Initial Process Development

			Monthly Expense	3-Month Total
Wages and Fringes				
Salaries				
Don Malcolm *			8000	24000
Contract Chemist	75.25	/hr	9030	27090
Lab Technician	30.00	/hr	3500	10500
Subtotal			20530	61590
Fringes				
FICA *			600	1800
Life and Med. Insurance *			750	2250
Subtotal			1350	4050
Consultant Expense				
Environmental Consultant			5000	15000
Subtotal			5000	15000
Travel				
Mileage			560	1680
Lodging			400	1200
Meals			350	1050
Airfare			1000	3000
Subtotal			2310	6930
Facilities				
Lab and Office (Rent)			2000	6000
Subtotal			2000	6000
Utilities				
Electricity			200	600
Phone			300	900
Water			75	225
Trash			50	150
Natural Gas			50	150
Subtotal			675	2025
Laboratory Expenses				
Parts			1000	3000
Analytic Gases			500	1500
Reagents			400	1200
Waste Disposal			500	1500
Lab Equipment (1x purchase)			5000	5000
Subtotal			7400	12200
Office Supplies				
Copier/Printer			200	600
Supplies			100	300
Subtotal			300	900

Biodiesel Development Budget DON MALCOLM

Laboratory and Initial Process Development

Contingency	(25%)	9891	27174
Grand Total		\$44,456	\$135,869

Biodiesel Development Budget

Plant Scale Production Test

		Monthly Expense	3-Month Total
Wages and Fringes			
Salaries			
Don Malcolm		8000	24000
Operations Supervisor		4000	12000
Operators (2)	\$15 /hr	5040	10080
Lab Technician	\$15 /hr	2520	7560
Subtotal		19560	53640
Fringes			
FICA		1467	4401
Life and Med. Insurance		3750	11250
Subtotal		5217	15651
Consultant Expense			
Environmental Consultant		10000	25000
Subtotal		10000	25000
Plant Trial Preparation and Support			
Mechanical Preparation			
Pipefitting	\$35 /hr	21000	28000
Elec. & Inst. Tech	\$35 /hr	4200	4200
Control System		7000	7000
Millwrights	\$35 /hr	7000	7000
Materials		15000	15000
Subtotal		54200	61200
Utilities			
Boiler rental		15000	30000
Chiller rental		15000	30000
Natural Gas		5000	5000
Water		250	250
Nitrogen		4000	4000
Subtotal		39250	69250
Facilities			
Plant Rental		10000	30000
Subtotal		10000	30000
Raw Materials and Wastes			
Oil		11000	11000
Methanol		525	525
Caustic		500	500
Waste Disposal		7000	7000
Subtotal		19025	19025

Biodiesel Development Budget

Plant Scale Production Test

Travel

Mileage	560	1680
Lodging	400	1200
Meals	350	1050
Airfare	1000	3000
Subtotal	2310	6930

Facilities

Lab and Office (Rent)	2000	6000
Subtotal	2000	6000

Utilities

Electricity	200	600
Phone	300	900
Water	200	600
Trash	50	150
Natural Gas	50	150
Subtotal	800	2400

Laboratory Expenses

Parts	1000	3000
Analytic Gases	500	1500
Reagents	400	1200
Waste Disposal	500	1500
Lab Equipment (1x purchase)	0	0
Subtotal	2400	7200

Office Supplies

Copier/Printer	200	600
Supplies	100	300
Subtotal	300	900

Contingency	(25%)	41266	74299
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Grand Total	\$206,328	\$371,495
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APPLICATION FOR FEDERAL ASSISTANCE

OMB Approval No. 0348-0043

		2. DATE SUBMITTED May 15, 2003		Applicant Identifier																											
1. TYPE OF SUBMISSION: <input type="checkbox"/> Application <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Non-Construction		3. DATE RECEIVED BY STATE		State Application Identifier																											
						4. DATE RECEIVED BY FEDERAL AGENCY		Federal Identifier																							
5. APPLICANT INFORMATION																															
Legal Name: Combustion Technologies, LLC			Organizational Unit: Main office - Little Rock, Arkansas																												
Address (give city, county, State, and zip code): P.O. Box 3730 Little Rock, Arkansas 72203			Name and telephone number of person to be contacted on matters involving this application (give area code): John or Cynthia Haley 501-225-9125																												
6. EMPLOYER IDENTIFICATION NUMBER (EIN): <div style="border: 1px solid black; padding: 2px; display: inline-block;"> 71-0830468 </div>			7. TYPE OF APPLICANT: (enter appropriate letter in box) <div style="display: flex; justify-content: space-between;"> <div> A. State B. County C. Municipal D. Township E. Interstate F. Intermunicipal G. Special District </div> <div> H. Independent School Dist. I. State Controlled Institution of Higher Learning J. Private University K. Indian Tribe L. Individual M. Profit Organization N. Other (Specify) _____ </div> </div> <div style="text-align: right; margin-top: -20px;"> <div style="border: 1px solid black; padding: 2px; display: inline-block;">M</div> </div>																												
8. TYPE OF APPLICATION: <div style="display: flex; justify-content: space-around;"> <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision </div> If Revision, enter appropriate letter(s) in box(es) A. Increase Award B. Decrease Award C. Increase Duration D. Decrease Duration Other(specify): _____			9. NAME OF FEDERAL AGENCY: United States Department of Agriculture																												
10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: <div style="border: 1px solid black; padding: 2px; display: inline-block;"> 81-087 </div>			11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT: ARKANSAS DELTA BIODIESEL RESEARCH PROJECT																												
12. AREAS AFFECTED BY PROJECT (Cities, Counties, States, etc.): EASTERN ARKANSAS																															
13. PROPOSED PROJECT		14. CONGRESSIONAL DISTRICTS OF: ARKANSAS 1ST & 4TH																													
Start Date 8/3/03	Ending Date 11/3/03	a. Applicant Combustion Technologies, LLC		b. Project BIODIESEL PRODUCT DEVELOPMENT AND PLANT																											
15. ESTIMATED FUNDING:		16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?																													
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:20%;">a. Federal</td> <td style="width:10%;">\$</td> <td style="width:10%; text-align: right;">968,500</td> <td style="width:10%; text-align: right;">00</td> </tr> <tr> <td>b. Applicant</td> <td>\$</td> <td style="text-align: right;">295,000</td> <td style="text-align: right;">00</td> </tr> <tr> <td>c. State</td> <td>\$</td> <td></td> <td style="text-align: right;">00</td> </tr> <tr> <td>d. Local</td> <td>\$</td> <td style="text-align: right;">296,000</td> <td style="text-align: right;">00</td> </tr> <tr> <td>e. Other</td> <td>\$</td> <td style="text-align: right;">200,000</td> <td style="text-align: right;">00</td> </tr> <tr> <td>f. Program Income</td> <td>\$</td> <td></td> <td style="text-align: right;">00</td> </tr> <tr> <td>g. TOTAL</td> <td>\$</td> <td style="text-align: right;">1,759,500</td> <td style="text-align: right;">00</td> </tr> </table>		a. Federal	\$	968,500	00	b. Applicant	\$	295,000	00	c. State	\$		00	d. Local	\$	296,000	00	e. Other	\$	200,000	00	f. Program Income	\$		00	g. TOTAL	\$	1,759,500	00	a. YES. THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON: DATE <u>05/15/03</u> b. No. <input type="checkbox"/> PROGRAM IS NOT COVERED BY E. O. 12372 <input type="checkbox"/> OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW	
a. Federal	\$	968,500	00																												
b. Applicant	\$	295,000	00																												
c. State	\$		00																												
d. Local	\$	296,000	00																												
e. Other	\$	200,000	00																												
f. Program Income	\$		00																												
g. TOTAL	\$	1,759,500	00																												
		17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT? <input type="checkbox"/> Yes If "Yes," attach an explanation. <input checked="" type="checkbox"/> No																													
18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT, THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.																															
a. Type Name of Authorized Representative JOHN H. HALEY		b. Title PRESIDENT		c. Telephone Number (501) 225-9125																											
d. Signature of Authorized Representative 				e. Date Signed 5-15-03																											

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ADEQ0018096

BUDGET INFORMATION - Non-Construction Programs

OMB Approval No. 0348-0044

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Biomass Research	81-087	\$	\$	\$ 848,500.00	\$ 714,000.00	\$ 1,562,500.00
2.						0.00
3.						0.00
4.						0.00
5. Totals		\$ 0.00	\$ 0.00	\$ 848,500.00	\$ 714,000.00	\$ 1,562,500.00

SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total (5)
	(1) Biomass Research	(2)	(3)	(4)	
a. Personnel	\$ 325,000.00	\$	\$	\$	\$ 325,000.00
b. Fringe Benefits					0.00
c. Travel	15,000.00				15,000.00
d. Equipment					0.00
e. Supplies	20,000.00				20,000.00
f. Contractual	1,364,000.00				1,364,000.00
g. Construction					0.00
h. Other	35,500.00				35,500.00
i. Total Direct Charges (sum of 6a-6h)	1,759,500.00	0.00	0.00	0.00	1,759,500.00
j. Indirect Charges	0.00				0.00
k. TOTALS (sum of 6i and 6j)	\$ 1,759,500.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 1,759,500.00
7. Program Income	\$ 0.00	\$	\$	\$	\$ 0.00

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SECTION C - NON-FEDERAL RESOURCES					
(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) TOTALS	
8. Biomass Research and Development Initiative	\$ 295,000.00	\$ 0.00	\$ 496,000.00	\$ 791,000.00	
9. Federal				0.00	
10. Private				0.00	
11.				0.00	
12. TOTAL (sum of lines 8-11)	\$ 295,000.00	\$ 0.00	\$ 496,000.00	\$ 791,000.00	
SECTION D - FORECASTED CASH NEEDS					
	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	\$ 925,500.00	\$ 345,500.00	\$ 254,000.00	\$ 163,000.00	\$ 163,000.00
14. Non-Federal	714,000.00	141,000.00	390,000.00	94,000.00	89,000.00
15. TOTAL (sum of lines 13 and 14)	\$ 1,639,500.00	\$ 486,500.00	\$ 644,000.00	\$ 257,000.00	\$ 252,000.00
SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT					
(a) Grant Program	FUTURE FUNDING PERIODS (Years)				
	(b) First	(c) Second	(d) Third	(e) Fourth	
16. Biomass Research and Development Initiative	\$	\$	\$	\$	
17. Federal	43,000.00				
18. Private	77,000.00				
19.					
20. TOTAL (sum of lines 16-19)	\$ 120,000.00	\$ 0.00	\$ 0.00	\$ 0.00	
SECTION F - OTHER BUDGET INFORMATION					
21. Direct Charges: 1,759,500		22. Indirect Charges: none			
23. Remarks:					

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Standard Form 424A (Rev. 7-97) Page 2

ADEQ0018096

ASSURANCES - NON-CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503.

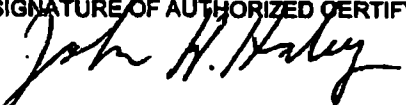
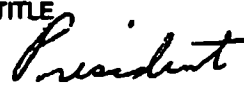
PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (Identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL 		TITLE 
APPLICANT ORGANIZATION <i>Combustion Technologies, L.L.C.</i>		DATE SUBMITTED May 15, 2003

Standard Form 424B (Rev. 7-97) Back

ADEQ0018096

AVENTIS (agreement regarding Ethephon
Supply & Assumption Agreement) 11/15/00



DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE
**MANUFACTURING DRAWBACK
ENTRY AND/OR CERTIFICATE**
19 CFR 191

Approved through 10/31/91 OMB No. 1515-0148.

Statement Required by 5 CFR 1320.21: The estimated average burden associated with this collection of information is 2.08 hours per respondent or recordkeeper depending on individual circumstances. Comments concerning the accuracy of this burden estimate and suggestions for reducing this burden should be directed to U.S. Customs Service, Paperwork Management Branch, Washington, DC 20228, and to the Office of Management and Budget, Paperwork Reduction Project (1515-0148), Washington, DC 20503.

Section I Type of Document	A. <input type="checkbox"/> DRAWBACK ENTRY FOR EXPORTED ARTICLES (ENTRY)	1. NUMBER
	B. <input type="checkbox"/> CERTIFICATE OF MANUFACTURE AND DELIVERY (CM)	1. NUMBER
	C. <input checked="" type="checkbox"/> CERTIFICATE OF DELIVERY OF IMPORTED MDSE. (CD)	1. NUMBER
		2. DATE DOCUMENT FILED (MMDDYY)

II. ENTRY (Claim) RECORD	3. ENTRY TYPE CODE	4. PORT CODE	5. CLAIMANT (Importer) ID No.	6. REFERENCE No.	7. ULTIMATE CLAIMANT AND ID NO.
	8. <input type="checkbox"/> APPLYING FOR ACCELERATED PAYMENT (Complete Items 10-14.)			9. <input type="checkbox"/> AUTHORIZED FOR EXPORTER'S SUMMARY PROCEDURE (Complete Items 10 and 11.)	
	10. BOND NO.	11. BOND TYPE CODE	12. DUTY REFUND \$	13. I.R. TAX REFUND \$	14. CLAIMED TOTAL REFUND \$
III. AUTHORIZATION		15. PURSUANT TO 19 U.S.C. 1313 (Indicated Below) OR 19 U.S.C. 1309(b) (Indicated Below)			16. T.D. No./APPROVAL
		FILED IN COMPLIANCE WITH 19 CFR 191 <input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f <input type="checkbox"/> g <input type="checkbox"/> h			

IV. IMPORTED DUTY-PAID MERCHANDISE OR DRAWBACK PRODUCTS

17. DESCRIPTION (Quantity, Kind, and Quality)

2 Tanks @ 38,680 net kgs of 3,4-Dichloroaniline Cont.#: SNIU121338-7; SNIU121340-6

18. IMPORT ENTRY NUMBER(S)	19. DATE:		20. PORT WHERE FILED	21. QUANTITY DESIGNATED	22. IMPORTED BY	23. IF 1313(b), DATE:		24. CM/CD NUMBER
	19a. OF IMPORT	19b. OF LIQUIDATION				23a. RECD AT FACTORY	23b. USED IN MFR.	
110-63082570	102097		2002	19,640 net kgs / 19,040 net kgs 19,040 net kgs	Bayer Corporation			
H.S.#: 2921.42.2300 Duty: 18904.10 Bayer No. 3041736; 3041732								

25. VALUE AT FACTORY	26. QUANTITY OF WASTE, IF ANY	27. FACTORY VALUE OF WASTE
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28. QUANTITY/DESCRIPTION OF MERCHANDISE USED

29. QUANTITY/DESCRIPTION OF ARTICLE(S) PRODUCED	30. DATE PRODUCED	PLEASE CONTINUE ON BACK OF FORM.
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CUSTOMERS USE ONLY	31. BEGINNING QUANTITY	32. CHARGED QUANTITY	33. BALANCE	34. DRAWBACK ENTRY NO., CM, or CD NO. TO WHICH CHARGED	35. GROSS PER UNIT DRAWBACK
SELECTIVITY		ACCELERATED		LIQUIDATED	
		I.R. TAX AMOUNT: \$		I.R. TAX AMOUNT: \$	
LIQUIDATOR CODE (INITIALS)		DUTY AMOUNT: \$		DUTY AMOUNT: \$	
		TOTAL AMOUNT: \$		TOTAL AMT: \$	

36. EXPORTER/SHIPPER NAME	37. EXPORT DATE
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38. QUANTITY/DESCRIPTION OF ARTICLES EXPORTED

VI. TAX ON DOMESTIC TAX-PAID ALCOHOL

39. DESCRIPTION OF ALCOHOL USED	40. QUANTITY/DESCRIPTION OF ARTICLES PRODUCED
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DOMESTIC TAX-PAID ALCOHOL USED IN THE MANUFACTURE OF THE ABOVE-DESCRIBED ARTICLES OR DELIVERED AS STATED IN SECTION VIII.

41. SERIAL NUMBERS OF PACKAGES	42. NO. AND DISTRICT OF DISTILLERY	43. DATE WITHDRAWN	44. SERIAL NUMBERS OF TAX-PAID STAMPS	45. WINE GALLONS	46. TAXABLE GALLONS	47. PROOF	48. WASTE

49. TAX PAID OR WITHDRAWN BY	50. CM OR CD NUMBER(S)
51. ATF CERTIFICATE NO. (If Known)	52. STATEMENT OF AMOUNT OF TAX CLAIMED (Check One) <input type="checkbox"/> \$1.00/Gal. <input type="checkbox"/> \$10.50/Gal. <input type="checkbox"/> \$ _____ (Other)

VII. CERTIFICATES OF MANUFACTURE AND DELIVERY

53. NAME OF MANUFACTURER OR PRODUCER	54. LOCATION (City & State)	55. DATE OF MFR.
56. ARTICLES DELIVERED TO AND DATE DELIVERED		
57. DECLARANT'S NAME	58. TITLE	59. SIGNATURE AND DATE SIGNED X
53. NAME OF MANUFACTURER OR PRODUCER		
54. LOCATION (City & State)		55. DATE OF MFR.
56. ARTICLES DELIVERED TO AND DATE DELIVERED		
57. DECLARANT'S NAME	58. TITLE	59. SIGNATURE AND DATE SIGNED X

VIII. CERTIFICATES OF DELIVERY OF IMPORTED MERCHANDISE

60. QUANTITY DELIVERED 38,680 net kgs	61. DESCRIPTION 3,4-Dichloroaniline, Pure	62. RECEIVED BY BAYER CORPORATION	63. DATE RECD. 102097
64. RECEIVED FROM		65. DELIVERED TO CEDAR CHEMICAL CORP.	66. DATE DEL. 103097
67. DECLARANT'S NAME JOANN BORGO	68. TITLE Attorney-in-fact	I certify that the within-described merchandise was received and delivered as stated herein.	
69. FIRM NAME BAYER CORPORATION		70. SIGNATURE AND DATE SIGNED X <i>Joann Borgo</i>	032598
60. QUANTITY DELIVERED	61. DESCRIPTION	62. RECEIVED BY	63. DATE RECD.
64. RECEIVED FROM		65. DELIVERED TO	66. DATE DEL.
67. DECLARANT'S NAME	68. TITLE	I certify that the within-described merchandise was received and delivered as stated herein.	
69. FIRM NAME		70. SIGNATURE AND DATE SIGNED X	

IX. DECLARATION OF EXPORTATION, LADING OR USE

71. MERCHANDISE WAS SOLD TO A DEPARTMENT, BRANCH, OR AGENCY OF THE UNITED STATES GOVERNMENT. <input type="checkbox"/> NO <input type="checkbox"/> YES	72. MERCHANDISE IS TO BE USED OR CONSUMED ON THE EXPORTING VESSEL OR AIRCRAFT. <input type="checkbox"/> NO <input type="checkbox"/> YES (Complete items 73 & 74)
73. (If item 72 answered "YES") PURPOSE OF USE OR CONSUMPTION AS SPECIFIED IN SEC. 309, T.A. OF 1930, AS AMENDED, OR SEC. 4222 (26 U.S.C. 5052(c)) INTERNAL REVENUE CODE.	
74. VESSEL OR AIRCRAFT (If item 72 is "YES")	
75. DECLARANT'S NAME	
I declare that according to my knowledge and belief, the particulars of exportation (or lading or use) stated in this document, the notices of lading, and receipts are correct and that the merchandise is not to be reloaded in the United States or any of its possessions.	
76. TITLE <input type="checkbox"/> Member of Firm <input type="checkbox"/> Officer Representing the Corporation <input type="checkbox"/> Agent <input type="checkbox"/> Attorney	78. SIGNATURE AND DATE SIGNED X
77. FIRM NAME	

PAPERWORK REDUCTION ACT NOTICE: This information is requested in order to carry out U.S. Department of the Treasury laws and regulations, to determine the eligibility for refund of taxes on domestic alcohol (if applicable), and to determine the proper amount of drawback. Your response is required to obtain or retain a benefit.



DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE
**MANUFACTURING DRAWBACK
ENTRY AND/OR CERTIFICATE**
19 CFR 191

Approved through 10/31/91. OMB No. 1515-0148.

Statement Required by 5 CFR 1320.21: The estimated average burden associated with this collection of information is 2.08 hours per respondent or recordkeeper depending on individual circumstances. Comments concerning the accuracy of this burden estimate and suggestions for reducing this burden should be directed to U.S. Customs Service, Paperwork Management Branch, Washington, DC 20226, and to the Office of Management and Budget, Paperwork Reduction Project (1515-0148), Washington, DC 20503.

Section
I

Type
of
Document

- A. ☐ DRAWBACK ENTRY FOR EXPORTED ARTICLES (ENTRY)
B. ☐ CERTIFICATE OF MANUFACTURE AND DELIVERY (CM)
C. ☒ CERTIFICATE OF DELIVERY OF IMPORTED MOSE (CD)

1. NUMBER

1. NUMBER

1. NUMBER

2. DATE DOCUMENT FILED (MMDDYY)

II. ENTRY (Claim) RECORD	3. ENTRY TYPE CODE	4. PORT CODE	5. CLAIMANT (Importer) ID No.	6. REFERENCE No.	7. ULTIMATE CLAIMANT AND ID NO.				
	8. <input type="checkbox"/> APPLYING FOR ACCELERATED PAYMENT (Complete Items 10-14.)			9. <input type="checkbox"/> AUTHORIZED FOR EXPORTER'S SUMMARY PROCEDURE (Complete Items 10 and 11.)					
	10. BOND NO.	11. BOND TYPE CODE	12. DUTY REFUND \$	13. I.R. TAX REFUND \$	14. CLAIMED TOTAL REFUND \$				
III. AUTHORIZATION	FILED IN COMPLIANCE WITH 19 CFR 191	15. PURSUANT TO 19 U.S.C. 1313 (Indicated Below) OR 19 U.S.C. 1308(b) (Indicated Below)			16. T.D. No./APPROVAL				
		<input type="checkbox"/> a	<input type="checkbox"/> b	<input type="checkbox"/> c	<input type="checkbox"/> d	<input type="checkbox"/> e	<input type="checkbox"/> f	<input type="checkbox"/> g	<input type="checkbox"/> h

IV. IMPORTED DUTY-PAID MERCHANDISE OR DRAWBACK PRODUCTS

17. DESCRIPTION (Quantity, Kind, and Quality)

2 Tanks @ 38,680 net kgs of 3,4-Dichloroaniline Cont.#: SNIU121338-7; SNIU121340-6

18. IMPORT ENTRY NUMBER(S)	19. DATE:		20. PORT WHERE FILED	21. QUANTITY DESIGNATED	22. IMPORTED BY	23. IF 1313(b), DATE:		24. CM/CD NUMBER
	19a. OF IMPORT	19b. OF LIQUIDATION				23a. RECD AT FACTORY	23b. USED IN MFR.	
110-63082570	102097		2002	19,640 net kgs / 19,040 net kgs 19,040 net kgs	Bayer Corporation			
H.S.#: 2921.42.2300 Duty: 18904.10 Bayer No. 3041736; 3041732								

25. VALUE AT FACTORY	26. QUANTITY OF WASTE, IF ANY	27. FACTORY VALUE OF WASTE
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28. QUANTITY/DESCRIPTION OF MERCHANDISE USED
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29. QUANTITY/DESCRIPTION OF ARTICLE(S) PRODUCED	30. DATE PRODUCED	PLEASE CONTINUE ON BACK OF FORM.
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CUSTOMS USE ONLY	31. BEGINNING QUANTITY	32. CHARGED QUANTITY	33. BALANCE	34. DRAWBACK ENTRY NO., CM, or CD NO. TO WHICH CHARGED	35. GROSS PER UNIT DRAWBACK
SELECTIVITY		ACCELERATED		LIQUIDATED	
		I.R. TAX AMOUNT: \$		I.R. TAX AMOUNT: \$	
LIQUIDATOR CODE (INITIALS)		DUTY AMOUNT: \$		DUTY AMOUNT: \$	
		TOTAL AMOUNT: \$		TOTAL AMT: \$	

AB000000606

V. EXPORT: ARTICLES EXPORTED UNDER DRAWDRAW REGULATIONS

36. EXPORTER/SHIPPER NAME

37. EXPORT DATE

38. QUANTITY/DESCRIPTION OF ARTICLES EXPORTED

VI. TAX ON DOMESTIC TAX-PAID ALCOHOL

39. DESCRIPTION OF ALCOHOL USED

40. QUANTITY/DESCRIPTION OF ARTICLES PRODUCED

DOMESTIC TAX-PAID ALCOHOL USED IN THE MANUFACTURE OF THE ABOVE-DESCRIBED ARTICLES OR DELIVERED AS STATED IN SECTION VIII.

41. SERIAL NUMBERS OF PACKAGES	42. NO. AND DISTRICT OF DISTILLERY	43. DATE WITHDRAWN	44. SERIAL NUMBERS OF TAX-PAID STAMPS	45. WINE GALLONS	46. TAXABLE GALLONS	47. PROOF	48. WASTE

49. TAX PAID OR WITHDRAWN BY

50. CM OR CD NUMBER(S)

51. ATF CERTIFICATE NO. (If Known)

52. STATEMENT OF AMOUNT OF TAX CLAIMED (Check One)

☐ \$1.00/Gal.

☐ \$10.00/Gal.

☐ \$ _____ (Other)

VII. CERTIFICATES OF MANUFACTURE AND DELIVERY

53. NAME OF MANUFACTURER OR PRODUCER

54. LOCATION (City & State)

55. DATE OF MFR.

56. ARTICLES DELIVERED TO AND DATE DELIVERED

The article(s) described in Sec. IV or VI was (were) manufactured or produced, and delivered, as stated herein in accordance with the contract on file with Customs and in compliance with all applicable laws and regulations.

59. SIGNATURE AND DATE SIGNED

X

57. DECLARANT'S NAME

58. TITLE

53. NAME OF MANUFACTURER OR PRODUCER

54. LOCATION (City & State)

55. DATE OF MFR.

56. ARTICLES DELIVERED TO AND DATE DELIVERED

The article(s) described in Sec. IV or VI was (were) manufactured or produced, and delivered, as stated herein in accordance with the contract on file with Customs and in compliance with all applicable laws and regulations.

59. SIGNATURE AND DATE SIGNED

X

57. DECLARANT'S NAME

58. TITLE

VIII. CERTIFICATES OF DELIVERY OF IMPORTED MERCHANDISE

60. QUANTITY DELIVERED

61. DESCRIPTION

62. RECEIVED BY

63. DATE RECI

38,680 net kgs

3,4-Dichloroaniline, Pure

BAYER CORPORATION

102097

64. RECEIVED FROM

65. DELIVERED TO

66. DATE DEL

CEDAR CHEMICAL CORP.

103097

67. DECLARANT'S NAME

68. TITLE

I certify that the within-described merchandise was received and delivered as stated herein.

70. SIGNATURE AND DATE SIGNED

X *Joann Borge*

032598

69. FIRM NAME

BAYER CORPORATION

60. QUANTITY DELIVERED

61. DESCRIPTION

62. RECEIVED BY

63. DATE RECO

64. RECEIVED FROM

65. DELIVERED TO

66. DATE DEL

67. DECLARANT'S NAME

68. TITLE

I certify that the within-described merchandise was received and delivered as stated herein.

70. SIGNATURE AND DATE SIGNED

X

69. FIRM NAME

IX. DECLARATION OF EXPORTATION, LADING OR USE

 71. MERCHANDISE WAS SOLD TO A DEPARTMENT, BRANCH, OR AGENCY OF THE UNITED STATES GOVERNMENT. ☐ NO ☐ YES

 72. MERCHANDISE IS TO BE USED OR CONSUMED ON THE EXPORTING VESSEL OR AIRCRAFT. ☐ NO ☐ YES (Complete Items 73 & 74)

73. (If Item 72 answered "YES") PURPOSE OF USE OR CONSUMPTION AS SPECIFIED IN SEC. 308, T.A. OF 1930, AS AMENDED, OR SEC. 4222 (28 U.S.C. 5082(c)) INTERNAL REVENUE CODE.

74. VESSEL OR AIRCRAFT (If Item 72 is "YES")

75. DECLARANT'S NAME

I declare that according to my knowledge and belief, the particulars of exportation (or lading or use) stated in this document, the notices of lading, and receipts are correct and that the merchandise is not to be reloaded in the United States or any of its possessions.

78. SIGNATURE AND DATE SIGNED

X

76. TITLE

☐ Member of Firm

☐ Officer Representing the Corporation

☐ Agent

☐ Attorney

77. FIRM NAME

PAPERWORK REDUCTION ACT NOTICE: This information is requested in order to carry out U.S. Department of the Treasury laws and regulations, to determine the eligibility for refund of taxes on domestic alcohol (if applicable), and to determine the proper amount of drawback. Your response is required to obtain or retain a benefit.

2-J.O., GPO: 1989-643-006/81030

Customs Form 331 (041788) (Back)

AB00000060



DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE
**MANUFACTURING DRAWBACK
ENTRY AND/OR CERTIFICATE**
19 CFR 191

Approved through 10/31/91. OMB No. 1515-0142.

Statement Required by 5 CFR 1320.21: The estimated average burden associated with this collection of information is 2.08 hours per respondent or recorder per depending on individual circumstances. Comments concerning the accuracy of this burden estimate and suggestions for reducing this burden should be directed to U.S. Customs Service, Paperwork Management Branch, Washington, DC 20226, and to the Office of Management and Budget, Paperwork Reduction Project (1515-0142), Washington, DC 20503.

Section I Type of Document	A. <input type="checkbox"/> DRAWBACK ENTRY FOR EXPORTED ARTICLES (ENTRY)	1. NUMBER
	B. <input type="checkbox"/> CERTIFICATE OF MANUFACTURE AND DELIVERY (CM)	1. NUMBER
	C. <input checked="" type="checkbox"/> CERTIFICATE OF DELIVERY OF IMPORTED MDSE. (CD)	1. NUMBER
		2. DATE DOCUMENT FILED (MMDDYY)

II. ENTRY (Customs) RECORD	3. ENTRY TYPE CODE	4. PORT CODE	5. CLAIMANT (Importer) ID No.	6. REFERENCE No.	7. ULTIMATE CLAIMANT AND ID NO.
	8. <input type="checkbox"/> APPLYING FOR ACCELERATED PAYMENT (Complete items 10-14.)			9. <input type="checkbox"/> AUTHORIZED FOR EXPORTER'S SUMMARY PROCEDURE (Complete items 10 and 11.)	
	10. BOND NO.	11. BOND TYPE CODE	12. DUTY REFUND \$	13. I.R. TAX REFUND \$	14. CLAIMED TOTAL REFUND \$
III. AUTHORIZATION		15. PURSUANT TO 19 U.S.C. 1313 (Indicated Below) OR 19 U.S.C. 1303(b) (Indicated Below)			16. T.D. No./APPROVAL

IV. IMPORTED DUTY-PAID MERCHANDISE OR DRAWBACK PRODUCTS

17. DESCRIPTION (Quantity, Kind, and Quality)

2 Tanks @ 38,680 net kgs of 3,4-Dichloroaniline Cont.#: SNIU121338-7; SNIU121340-6

19. IMPORT ENTRY NUMBER(S)	18. DATE:		20. PORT WHERE FILED	21. QUANTITY DESIGNATED	22. IMPORTED BY	23. IF 1313(b), DATE:		24. CM/CD NUMBER
	18a. OF IMPORT	18b. OF LIQUIDATION				23a. RECD AT FACTORY	23b. USED IN MFR.	
110-63082570	102097		2002	19,640 net kgs / 10,040 net kgs	Bayer Corporation			
H.S.#: 2921.42.2300 Duty: 18904.10 Bayer No. 3041736; 3041732								

Sent originals
back to Bayer
4/7 -

25. VALUE AT FACTORY 26. QUANTITY OF WASTE, IF ANY

27. QUANTITY/DESCRIPTION OF MERCHANDISE USED

28. QUANTITY/DESCRIPTION OF ARTICLE(S) PRODUCED

CUSTOMS USE ONLY	USE ITEMS 31-35 TO DESI- GNATE A CM OR CD.	31. BEGINNING QUANTITY	32. CHARGED QUANTITY	33. BALANCE	34. DRAWBACK ENTRY NO., CM, or CD NO. TO WHICH CHARGED	35. GROSS PER UNIT DRAWBACK
SELECTIVITY		ACCELERATED			LIQUIDATED	
		I.R. TAX AMOUNT: \$			I.R. TAX AMOUNT: \$	
LIQUIDATOR CODE (INITIALS)		DUTY AMOUNT: \$			DUTY AMOUNT: \$	
		TOTAL AMOUNT: \$			TOTAL AMT: \$	

SEE BACK OF FORM FOR PAPERWORK REDUCTION ACT NOTICE.

Customs Form 331 (041789)

AB000000601

36. EXPORTER/SHIPPER NAME	37. EXPORT DATE
---------------------------	-----------------

38. QUANTITY/DESCRIPTION OF ARTICLES EXPORTED

VI. TAX ON DOMESTIC TAX-PAID ALCOHOL	40. QUANTITY/DESCRIPTION OF ARTICLES PRODUCED
39. DESCRIPTION OF ALCOHOL USED	

DOMESTIC TAX-PAID ALCOHOL USED IN THE MANUFACTURE OF THE ABOVE-DESCRIBED ARTICLES OR DELIVERED AS STATED IN SECTION VIII.							
41. SERIAL NUMBERS OF PACKAGES	42. NO. AND DISTRICT OF DISTILLERY	43. DATE WITHDRAWN	44. SERIAL NUMBERS OF TAX-PAID STAMPS	45. WINE GALLONS	46. TAXABLE GALLONS	47. PROOF	48. WASTE

49. TAX PAID OR WITHDRAWN BY	50. CM OR CD NUMBER(S)
51. ATF CERTIFICATE NO. (If Known)	52. STATEMENT OF AMOUNT OF TAX CLAIMED (Check One) <input type="checkbox"/> \$1.00/Gal. <input type="checkbox"/> \$10.50/Gal. <input type="checkbox"/> \$ _____ (Other)

VII. CERTIFICATES OF MANUFACTURE AND DELIVERY	
53. NAME OF MANUFACTURER OR PRODUCER	54. LOCATION (City & State)
55. ARTICLES DELIVERED TO AND DATE DELIVERED	The article(s) described in Sec. IV or VI was (were) manufactured or produced, and delivered, as stated herein in accordance with the contract on file with Customs and in compliance with all applicable laws and regulations. 59. SIGNATURE AND DATE SIGNED X
57. DECLARANT'S NAME 58. TITLE	
53. NAME OF MANUFACTURER OR PRODUCER	54. LOCATION (City & State)
55. ARTICLES DELIVERED TO AND DATE DELIVERED	The article(s) described in Sec. IV or VI was (were) manufactured or produced, and delivered, as stated herein in accordance with the contract on file with Customs and in compliance with all applicable laws and regulations. 59. SIGNATURE AND DATE SIGNED X
57. DECLARANT'S NAME 58. TITLE	

VIII. CERTIFICATES OF DELIVERY OF IMPORTED MERCHANDISE			
60. QUANTITY DELIVERED	61. DESCRIPTION	62. RECEIVED BY	63. DATE RECD
38,680 net kgs	3,4-Dichloroaniline, Pure	BAYER CORPORATION	102097
64. RECEIVED FROM		65. DELIVERED TO	66. DATE DEL
		CEDAR CHEMICAL CORP.	103097
67. DECLARANT'S NAME	68. TITLE	I certify that the within-described merchandise was received and delivered as stated herein.	
JOANN BORGO	Attorney-in-fact	70. SIGNATURE AND DATE SIGNED X <i>Joann Borgo</i>	
69. FIRM NAME		032598	
BAYER CORPORATION			
60. QUANTITY DELIVERED	61. DESCRIPTION	62. RECEIVED BY	63. DATE RECD.
64. RECEIVED FROM		65. DELIVERED TO	66. DATE DEL
67. DECLARANT'S NAME	68. TITLE	I certify that the within-described merchandise was received and delivered as stated herein.	
		70. SIGNATURE AND DATE SIGNED X	
69. FIRM NAME			

IX. DECLARATION OF EXPORTATION, LADING OR USE			
71. MERCHANDISE WAS SOLD TO A DEPARTMENT, BRANCH, OR AGENCY OF THE UNITED STATES GOVERNMENT. <input type="checkbox"/> NO <input type="checkbox"/> YES	72. MERCHANDISE IS TO BE USED OR CONSUMED ON THE EXPORTING VESSEL OR AIRCRAFT. <input type="checkbox"/> NO <input type="checkbox"/> YES (Complete Items 73 & 74)		
73. (If Item 72 answered "YES") PURPOSE OF USE OR CONSUMPTION AS SPECIFIED IN SEC. 306, T.A. OF 1930, AS AMENDED, OR SEC. 4222 (28 U.S.C. 5062(a)) INTERNAL REVENUE CODE.		74. VESSEL OR AIRCRAFT (If Item 72 is "YES")	
75. DECLARANT'S NAME		I declare that according to my knowledge and belief, the particulars of exportation (or lading or use) stated in this document, the notices of lading, and receipts are correct and that the merchandise is not to be reloaded in the United States or any of its possessions.	
76. TITLE		78. SIGNATURE AND DATE SIGNED	
<input type="checkbox"/> Member of Firm <input type="checkbox"/> Officer Representing the Corporation <input type="checkbox"/> Agent <input type="checkbox"/> Attorney		X	
77. FIRM NAME			



DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE
**MANUFACTURING DRAWDRAWBACK
ENTRY CERTIFICATE**
19 CFR 191

Statements Required by 5 CFR 1320.21: The estimated average burden associated with this entry is 2.08 hours per respondent or recordkeeper depending on individual circumstances. Comments concerning the accuracy of this burden estimate and suggestions for reducing this burden should be directed to U.S. Customs Service, Paperwork Management Branch, Washington, DC 20226, and to the Office of Management and Budget, Paperwork Reduction Project (1515-0149), Washington, DC 20503.

Section I Type of Document	A. <input type="checkbox"/> DRAWDRAWBACK ENTRY FOR EXPORTED ARTICLES (ENTRY)	1. NUMBER
	B. <input type="checkbox"/> CERTIFICATE OF MANUFACTURE AND DELIVERY (CM)	1. NUMBER
	C. <input checked="" type="checkbox"/> CERTIFICATE OF DELIVERY OF IMPORTED MOSE (CD)	1. NUMBER
		2. DATE DOCUMENT FILED (MMDDYY)

II. ENTRY (Customs) RECORD	3. ENTRY TYPE CODE	4. PORT CODE	5. CLAIMANT (Importer) ID No.	6. REFERENCE No.	7. ULTIMATE CLAIMANT AND ID NO.
	8. <input type="checkbox"/> APPLYING FOR ACCELERATED PAYMENT (Complete Items 10-14.)		9. <input type="checkbox"/> AUTHORIZED FOR EXPORTER'S SUMMARY PROCEDURE (Complete Items 10 and 11.)		
	10. BOND NO.	11. BOND TYPE CODE	12. DUTY REFUND \$	13. I.R. TAX REFUND \$	14. CLAIMED TOTAL REFUND \$
III. AUTHORIZATION		FILED IN COMPLIANCE WITH 19 CFR 191 <input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f <input type="checkbox"/> g <input type="checkbox"/> h			15. PURSUANT TO 19 U.S.C. 1313 (Indicated Below) OR 19 U.S.C. 1309(b) (Indicated Below)
16. T.D. No./APPROVAL					

IV. IMPORTED DUTY-PAID MERCHANDISE OR DRAWDRAWBACK PRODUCTS

17. DESCRIPTION (Quantity, Kind, and Quality)

2 Tanks @ 38,680 net kgs of 3,4-Dichloroaniline Cont.#: SNIU121338-7; SNIU121340-6

18. IMPORT ENTRY NUMBER(S)	19. DATE:		20. PORT WHERE FILED	21. QUANTITY DESIGNATED	22. IMPORTED BY	23. IF 1313(b), DATE:		24. CM/CD NUMBER
	19a. OF IMPORT	19b. OF LIQUIDATION				23a. RECD AT FACTORY	23b. USED IN MFR.	
110-63082570 H.S.#: 2921.42.2300 Duty: 18904.10 Bayer No. 3041736; 3041732	102097		2002	19,640 net kgs / 10,040 net kgs	Bayer Corporation			

25. VALUE AT FACTORY	26. QUANTITY OF WASTE, IF ANY	27. FACTORY VALUE OF WASTE
----------------------	-------------------------------	----------------------------

28. QUANTITY/DESCRIPTION OF MERCHANDISE USED

29. QUANTITY/DESCRIPTION OF ARTICLE(S) PRODUCED	30. DATE PRODUCED	PLEASE CONTINUE ON BACK OF FORM.
---	-------------------	----------------------------------

CUSTOMS USE ONLY	31. BEGINNING QUANTITY	32. CHARGED QUANTITY	33. BALANCE	34. DRAWDRAWBACK ENTRY NO., CM, or CD NO. TO WHICH CHARGED	35. GROSS PER UNIT DRAWDRAWBACK
SELECTIVITY		ACCELERATED		LIQUIDATED	
		I.R. TAX AMOUNT: \$		I.R. TAX AMOUNT: \$	
LIQUIDATOR CODE (INITIALS)		DUTY AMOUNT: \$		DUTY AMOUNT: \$	
		TOTAL AMOUNT: \$		TOTAL AMT: \$	

38. EXPORTER/SHIPPER NAME	37. EXPORT DATE
---------------------------	-----------------

39. QUANTITY/DESCRIPTION OF ARTICLES EXPORTED

VI. TAX ON DOMESTIC TAX-PAID ALCOHOL

40. DESCRIPTION OF ALCOHOL USED	40. QUANTITY/DESCRIPTION OF ARTICLES PRODUCED
---------------------------------	---

DOMESTIC TAX-PAID ALCOHOL USED IN THE MANUFACTURE OF THE ABOVE-DESCRIBED ARTICLES OR DELIVERED AS STATED IN SECTION VIII.

41. SERIAL NUMBERS OF PACKAGES	42. NO. AND DISTRICT OF DISTILLERY	43. DATE WITHDRAWN	44. SERIAL NUMBERS OF TAX-PAID STAMPS	45. WINE GALLONS	46. TAXABLE GALLONS	47. PROOF	48. WASTE

49. TAX PAID OR WITHDRAWN BY	50. CM OR CD NUMBER(S)
------------------------------	------------------------

51. ATF CERTIFICATE NO. (If Known)	52. STATEMENT OF AMOUNT OF TAX CLAIMED (Check One) <input type="checkbox"/> \$1.00/Gal. <input type="checkbox"/> \$10.00/Gal. <input type="checkbox"/> \$ _____ (Other)
------------------------------------	--

VII. CERTIFICATES OF MANUFACTURE AND DELIVERY

53. NAME OF MANUFACTURER OR PRODUCER	54. LOCATION (City & State)	55. DATE OF MFR.
--------------------------------------	-----------------------------	------------------

56. ARTICLES DELIVERED TO AND DATE DELIVERED		The article(s) described in Sec. IV or VI was (were) manufactured or produced, and delivered, as stated herein in accordance with the contract on file with Customs and in compliance with all applicable laws and regulations. 59. SIGNATURE AND DATE SIGNED X
57. DECLARANT'S NAME	58. TITLE	

61. NAME OF MANUFACTURER OR PRODUCER	64. LOCATION (City & State)	65. DATE OF MFR.
--------------------------------------	-----------------------------	------------------

62. ARTICLES DELIVERED TO AND DATE DELIVERED		The article(s) described in Sec. IV or VI was (were) manufactured or produced, and delivered, as stated herein in accordance with the contract on file with Customs and in compliance with all applicable laws and regulations. 69. SIGNATURE AND DATE SIGNED X
67. DECLARANT'S NAME	68. TITLE	

VIII. CERTIFICATES OF DELIVERY OF IMPORTED MERCHANDISE

60. QUANTITY DELIVERED 38,680 net kgs	61. DESCRIPTION 3,4-Dichloroaniline, Pure	62. RECEIVED BY BAYER CORPORATION	63. DATE REC'D 102097
64. RECEIVED FROM		68. DELIVERED TO CEDAR CHEMICAL CORP.	69. DATE DEL. 103097

67. DECLARANT'S NAME JOANN BORG	68. TITLE Attorney-in-fact	I certify that the within-described merchandise was received and delivered as stated herein. 70. SIGNATURE AND DATE SIGNED X <i>John Borge</i> 032598	
69. FIRM NAME BAYER CORPORATION			

70. QUANTITY DELIVERED	71. DESCRIPTION	72. RECEIVED BY	73. DATE REC'D
74. RECEIVED FROM		75. DELIVERED TO	76. DATE DEL.

77. DECLARANT'S NAME	78. TITLE	I certify that the within-described merchandise was received and delivered as stated herein. 70. SIGNATURE AND DATE SIGNED X	
79. FIRM NAME			

IX. DECLARATION OF EXPORTATION, LADING OR USE

71. MERCHANDISE WAS SOLD TO A DEPARTMENT, BRANCH, OR AGENCY OF THE UNITED STATES GOVERNMENT. <input type="checkbox"/> NO <input type="checkbox"/> YES	72. MERCHANDISE IS TO BE USED OR CONSUMED ON THE EXPORTING VESSEL OR AIRCRAFT. <input type="checkbox"/> NO <input type="checkbox"/> YES (Complete Items 73 & 74)
---	--

73. (If Item 72 answered "YES") PURPOSE OF USE OR CONSUMPTION AS SPECIFIED IN SEC. 309, T.A. OF 1930, AS AMENDED, OR SEC. 4222 (26 U.S.C. 5002(c)) INTERNAL REVENUE CODE.	74. VESSEL OR AIRCRAFT (If Item 72 is "YES")
---	--

75. DECLARANT'S NAME	I declare that according to my knowledge and belief, the particulars of exportation (or lading or use) stated in this document, the notices of lading, and receipts are correct and that the merchandise is not to be reloaded in the United States or any of its possessions. 78. SIGNATURE AND DATE SIGNED X
76. TITLE <input type="checkbox"/> Member of Firm <input type="checkbox"/> Officer Representing the Corporation <input type="checkbox"/> Agent <input type="checkbox"/> Attorney	
77. FIRM NAME	

IP2

PRINT DATE 3/23/01 TIME 11:43:44

MEMPHIS, TN RICECO, LLC

ORDER ORDER
DATE# NUMBER

3/23/01 3449

SOLD TO:AVENTIS CRPSCE ITALIA SPA
21040 ORIGGIO (VA)
PIAZZALE STEFANO TURR, 5
11-20149 MILANO
VIALE EUROPA

REQ DELV DATE: 4/24/01

REQ SHIP DATE: 3/26/01

FX 0039-02-31-913-366 80-082-3040

SHIP TO:AVENTIS CROPS SCIENCE
ITALIA SPA ITALIA
C/O AGRIFORMULA
LOCALITA CASELLE DE BAZZA
NO 67100 L'AQUILA

DONATELLA NERI 390 231-191-3366

CUST. NO.	CUST ORDER NO.	SALESMAN	FRT.PPD/COL
6000-01	104906/220301	R. VEGA	PREPAID
SHIPPED FROM	FOB POINT	SHIP VIA	TERMS
WEST HELENA PLANT	DESTINATION	COMMON CARRIER	NET 120 DAYS
QTY	CONTAINER	ITEM	
ORDERED	SIZE	NUMBER	DESCRIPTION

100 BAG 03060 FLAKE TECH 25 KG
I CIF ITALIAN PORTAVENTIS TECH
104906OK
3/23
sup 3/20

GILSCOT GUIDROZ INTERNATIONAL

201 EVANS RD., STE 333 NEW ORLEANS, LA 70123

PHONE: 504-731-1997 FAX: 504-731-1998

TO: RAFAEL VEGA-RICECO

CC: LISA WALKER-CED AR

DATE: 3/23/01

BOOKING CONFIRMATION

FROM: ADA VINCENT

SHIPPER: RICECO

ORDER REF NO: 3449

NO. PCS & WEIGHT: 3 PLTS N/H HERBICIDES

BKG NO: MEMMLN0114001

VESSEL: ZIM EUROPA V14

C/O: 3/28

ETS: 4/4

ETA: 4/22

SS CO.: CAROTRANS

PLACE OF RECEIPT: MEMPHIS

LOAD PORT: JERSEY CITY, N.J.

DESTINATION PORT: GENOA

SUPPLIER/PICK UP LOCATION: CED AR TO LOAD

MONDAY MORNING 3/26/01 TRUCKER WILL BE

AMERICAN FREIGHTWAYS

DELIVERY INFO: GILSCOT C/O CAROTRANS

C/O FORWARD AIR INTL

8338 DEMOCRAT ROAD

MEMPHIS, TN 38118

REV. A *TANK CARS ARE LOADED TO FULL
SHELL GALLONAGE CAPACITY

CARRIER'S NO.

RESERVED means a the same manner and parts in effect as the date of the issue of the Bill of Lading

Subject to Section 7 of conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the consignee, the consignee shall sign the following statement.

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

If charges are to be prepaid, write or stamp here, "To be Prepaid." **PREPAID**

Rec'd \$_____ to
apply in prepayment of the
charges on the property
described herein.

Agent or Captain.

Per _____
(The signature here acknowledges only the amount prepaid.)

Charges advanced:

SHIPPER'S NUMBER

NO R - 1047

[illegible]

CONSIGNEE TO MAIL OR STREET ADDRESS OF CORRESPONDENT - For purposes of notification only.

GILCOT GUIDROZ
C/O CAROTRANS C/O FORWARD AIR INTL.
8338 DEMOCRAT ROAD
MEMPHIS, TN 38118

"DELV. ADDRESS

COUNTY

SOLD TO:

AYENTIS

RICECO

Per _____
(Signature of Consignor)



FROM:

**RICECO
5100 POPLAR AVENUE
SUITE 2428
MEMPHIS, TN 38187**

**FOR CHEMICAL EMERGENCY --
SPILL, LEAK, FIRE, EXPOSURE
OR ACCIDENT. CALL CHEMTREC --
DAY OR NIGHT 1-800-424-9300.**

CUSTOMER ORDER NO. 104906/220301		RICECO ORDER NO. 3449		DATE SHIPPED 3-26-01		BOOKING# MEMMLN0114001	
CAR VEHICLE INITIALS & NUMBER P13557		3060		GROSS WT. 5,800	TARE	NET WEIGHT POUNDS 5,500	TONS
						ANALYSIS	

(*To be filled in only when shopper desires and governing tariff provides for delivery thereof.)

NUMBER &	TYPE OF PACKAGES	Check if haz- ardous material	Description of Articles, Special Marks & Exceptions	QUANTITY	BASES	WEIGHTS
100	25 KG BAGS		CHEMICALS, N.O.I., PROPANIL TECHNICAL - FLAKED  095783066-1  BOOKING# NEMMLND114001 STEAMSHIP LINE: CAROTRAMS VESSEL: "ZIM EURPOA V.14"			55 LBS. NET EACH 58 LBS. GROSS EACH LOT# FL03110-01 100
SEAL#						

* This is to certify that the above named articles are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

RICE

SECRET

\$NEW _____ Agent

+ Snipper's imprint in line of goods: not a part of bill of lading approved by the Maritime Commerce Commission.

*THE CONTAINERS USED FOR THIS SHIPMENT ARE MARKED AS REQUIRED TO INDICATE COMPLIANCE WITH THE REQUIREMENTS OF THE GOVERNING HAZ CH MOTOR FREIGHT CLASSIFICATION

The description and weights indicated on this bill of lading are correct, subject to verification by the Weighing and Inspection Bureau having jurisdiction, according to agreement.

RICE

PER 2000 2000

*PARTIAL NO.

CAR SEAL

***DUNNAGE**

***ORDER BILLING DETAIL**

Permanent post office address of sender:

RICEBO, 5160 POPLAR AVE. SUITE 2410, MEMPHIS, TN 38117

ORIGINAL

AE000001989

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Raw Materials Acceptance Specs

Page # 1

Chemical	Supplier Name	City	State	Spec #
2,4 DCA, CYC	VARIOUS			910200

COPY 4

Test	Method	Type	Low	High	Description
2,4 DCA% COA			99.0000	100.0000	.

Chemical	Supplier Name	City	State	Spec #
ACETIC ACID				910194

Chemical	Supplier Name	City	State	Spec #
ACETIC ACID	A AND W AMERICAS	CHARLESTON	SC	910058

Test	Method	Type	Low	High	Description
ACETIC % COA			96.5000	100.0000	ACETIC % 96.5 min

Chemical	Supplier Name	City	State	Spec #
ACETIC ANHYD	EASTMAN CHEMICAL CO.	KINGSPORT	TN	910090

Test	Method	Type	Low	High	Description
ANHYD % COA			99.5000	100.0000	99.5% min

Chemical	Supplier Name	City	State	Spec #
ACETIC ANHYD	HOECHST-CELANESE	PAMPA	TX	910034

Test	Method	Type	Low	High	Description
ANHYD % COA			99.5000	100.0000	ANHYDRIDE %99.5 min

Chemical	Supplier Name	City	State	Spec #
ACETIC TRUCK	CONE SOLVENTS	MEMPHIS	TN	910108

Test	Method	Type	Low	High	Description
%PURITY coa			99.8500	100.0000	purity
ACETIC % COA			95.0000	99.9000	95-99.9%active

Chemical	Supplier Name	City	State	Spec #
ACETIC\FMC	CONE SOLVENTS	MEMPHIS	TN	910136

Test	Method	Type	Low	High	Description
% ACTIVE COA			95.0000	99.9000	% acetic acid active
%PURITY coa			99.8500	100.0000	purity for glacial acetic acid

Chemical	Supplier Name	City	State	Spec #
ACETONE	JLM INDUSTRIES	MT VERNON, INDIANA	IN	910057

Test	Method	Type	Low	High	Description
WATER % COA			0.0100	0.3000	0.3% water max

Chemical	Supplier Name	City	State	Spec #
ACETONE	IDEAL	MEMPHIS	TN	910056

Test	Method	Type	Low	High	Description
WATER % COA		N	0.0100	0.3000	WATER IN ACETONE 0.3% max

APPROVED
SEP 12 2001
BY: <i>[Signature]</i>

Chemical	Supplier Name	City	State	Spec #
AGENT 1568-6	STEPAN	WINDER	GA	910064

Test	Method	Type	Low	High	Description
PERFORMN	PROP-7		1.0000	3.0000	1 = fail, 2 = pass
WATER %	GAM-2		0.0100	2.0000	.

Chemical	Supplier Name	City	State	Spec #
AGNT X205615	STEPAN	WINDER	GA	910103

Test	Method	Type	Low	High	Description
PERMFORN	PROP-7		1.0000	3.0000	PROPANIL EMULSION PERFORMANCE 1 = fail, 2 = pass
WATER %	GAM-2		0.0100	2.0000	.

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Raw Materials Acceptance Specs

Page # 2

Chemical	Supplier Name	City	State	Spec #
ALUM SULFATE	CONE SOLVENTS	MEMPHIS	TN	910133
Test	Method	Type	Low	High
WT % ALM COA			48.0000	52.0000

Chemical	Supplier Name	City	State	Spec #
ANHYD. HCL	VARIOUS			910094
Test	Method	Type	Low	High
%HCL-ANH from COA			99.0000	100.0000

% anhydrous HCL 99% min

Chemical	Supplier Name	City	State	Spec #
AU-522	ADJU. UNLLIM .3LB EMULS.	TULSA	OK	910043
Test	Method	Type	Low	High
PERFORMN PROP-7			1.0000	3.0000
WATER % GAM-2			0.0100	2.0000

1 = fail, 2 = pass.

Chemical	Supplier Name	City	State	Spec #
B AROMATICS	BASIS PETROLEUM	HOUSTON	TX	910021
Test	Method	Type	Low	High
B AROMAT COA			1.0000	3.0000

1 = not B grade, 2 = is B grade

Chemical	Supplier Name	City	State	Spec #
B AROMATICS	PHIBRO	HOUSTON	TX	910055
Test	Method	Type	Low	High
B AROMAT COA			1.0000	3.0000

1 = not B grade, 2 = is B grade

Chemical	Supplier Name	City	State	Spec #
B-ODCB				910004
Test	Method	Type	Low	High
%ODCB	na		98.0000	100.0000
%PDCB	na		0.0010	2.0000

Bayer ODCB 98.5%min odcB, 1% max pdcb

para

Chemical	Supplier Name	City	State	Spec #
BHT	VARIOUS			910126
Test	Method	Type	Low	High
ASH	COA		0.0001	0.0020
COLOR	COA		0.0010	5.0000
FREEZ PT	COA		0.0010	69.3000
MOISTURE	COA		0.0001	0.0500
PURITY	COA		99.0000	100.0000

ASH = 0.002 MAX, 2,6DI-TERT-BUTYL-PARA-CRESOL = BHT

APHA COLOR OF 10% SOLUTION = 5MAX

69.2 C MINIMUM FREEZE POINT

0.05% MAX MOISTURE

2,6-DITERT-BUTYL PARA-CRESOL = BHT

Chemical	Supplier Name	City	State	Spec #
BROMINE	VARIOUS			910183

Test	Method	Type	Low	High	Description
BROMIN %	COA		99.9000	100.0000	.

Chemical	Supplier Name	City	State	Spec #
BUTYL ALCOHL	SHELL CHEMICAL CO	DEER PARK	TX	910060

Test	Method	Type	Low	High	Description
BUTYL %	COA		99.0000	100.0000	99%min.

Chemical	Supplier Name	City	State	Spec #
C-5643 EMULS	WITCO	MEMPHIS	TX	910205

Test	Method	Type	Low	High	Description
EMULS	COA		1.0000	2.0000	.
WATER %	COA		0.0100	1.0000	.

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Raw Materials Acceptance Specs

Page # 3

Chemical	Supplier Name	City	State	Spec #
CALC CHLORID	TETRA CHEMICALS	WEST MEMPHIS	AR	910062
Test	Method	Type	Low	High
NO SPEC.	no specs		1.0000	3.0000
Description: no specification required - 1=we reject, 2 = we accept.				

Chemical	Supplier Name	City	State	Spec #
CALCCHLR-FMC	VARIOUS			910154
Test	Method	Type	Low	High
CACL2 %	coa		34.0000	38.0000
Description: .				

Chemical	Supplier Name	City	State	Spec #
CATALYST-DCA	JOHNSON MATTHEY	WEST DEPTFORD	NJ	910167
Test	Method	Type	Low	High
ACTIVITY R&D			6.0000	12.0000
Description: .				

Chemical	Supplier Name	City	State	Spec #
CATLYST-CYMP	VARIOUS			910151
Test	Method	Type	Low	High
PALLADIM COA	G		5.0000	0.0000
Description: .				

Chemical	Supplier Name	City	State	Spec #
CAUSTIC\FMC	CHEMTECH.	MEMPHIS	TN	910134
Test	Method	Type	Low	High
% NAOH	COA		49.0000	51.0000
Description: .				

Chemical	Supplier Name	City	State	Spec #
CHLORINE\FMC	IDEAL	MEMPHIS	TN	910135
Test	Method	Type	Low	High
CHLORINE COA			99.5000	100.0000
Description: %chlorine				

Chemical	Supplier Name	City	State	Spec #
CPDM-CYCLAN	CREANOVA			910199
Test	Method	Type	Low	High
DIMM %	COA	L	1.0000	1.0000
DMF %	COA	L	0.7500	0.7500
PURITY %	COA	G	97.5000	0.0000
Description: .				

Chemical	Supplier Name	City	State	Spec #
CYCLOHEXANE				910187
Chemical	Supplier Name	City <td>State</td> <td>Spec #</td>	State	Spec #
CYCLOHEXANE	CONE SOLVENTS	MEMPHIS	TN	910174
Test	Method	Type	Low	High
% H2O	COA		0.0100	0.1000
Description: .				

Chemical	Supplier Name		City		State	Spec #
DCA	BAYER PRODUCTS		PITTSBURGH		PA	910127
Test	Method	Type	Low	High	Description	
% DCA	COA		98.0000	100.0000	% DCA	
H2O PPM	COA		0.0001	500.0000	Water in DCA	

Chemical	Supplier Name		City		State	Spec #
DCA	TOLOCHIMIE		TOULOUSE			910146
Test	Method	Type	Low	High	Description	
DCA %	COA		98.0000	100.0000	.	
WATERPPM	COA		10.0000	1000.0000	.	

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Raw Materials Acceptance Specs

Page # 4

Chemical	Supplier Name	City	State	Spec #
DCA RM-PROCH	PROCHROM INC.	SALVADOR-BAHTI		910104

Test	Method	Type	Low	High	Description
COA	COA		98.0000	100.0000	98%min., 500 ppm water max

Chemical	Supplier Name	City	State	Spec #
DCP-DOVER	SCHNECTADY CHEMICAL			910163

Test	Method	Type	Low	High	Description
ASSAY %	COA		95.0000	100.0000	.
H2O PPM	COA		0.0100	200.0000	.

Chemical	Supplier Name	City	State	Spec #
DCPD	BF GOODRICH	CALVERT CITY	KY	910125

Test	Method	Type	Low	High	Description
C10,ACET	COA		0.0025	0.0055	C10%
DCPD %	COA	G	99.0000	100.0000	% DCPD
OXY'S	COA	L	0.0001	0.0025	0.0025% MAX
WATER	COA		0.0001	100.0000	100 PPM WATER MAX

Chemical	Supplier Name	City	State	Spec #
DCPD	KMTEX	PORT ARTHUR	TX	910045

Test	Method	Type	Low	High	Description
C10 ACET	COA		0.0025	0.0055	C10 %
DCPD %	COA	G	99.0000	100.0000	99%min
OXYS	COA	L	0.0001	0.0025	0.0025%MAX
WATER	COA		0.0001	100.0000	100 PPM MAX WATER

Chemical	Supplier Name	City	State	Spec #
DCPD	VARIOUS			910165

Test	Method	Type	Low	High	Description
C10	COA		0.0025	0.0055	C10 ACETYLENES
DCPD	COA		99.0000	100.0000	%DCPD 99.0%MIN
OXY	COA		0.0001	0.0025	OXY 0.0025% MAX
WATER	COA		0.0001	100.0000	WATER 100 PPM MAX

Chemical	Supplier Name	City	State	Spec #
DCPI	TOLOCHIMIE	TOULOUSE		910031

Test	Method	Type	Low	High	Description
DCPI %	COA		98.0000	100.0000	98%min

Chemical	Supplier Name	City	State	Spec #
DCPI,PPG	PPG INDUSTRIES	NATRIUM	WV	910202

Test	Method	Type	Low	High	Description
------	--------	------	-----	------	-------------

2,3 DCPI	COA	0.0100	0.9000 .
DCPI, %	COA	98.7000	100.0000 .

Chemical	Supplier Name	City	State	Spec #
DEAC	VARIOUS			910123

Test	Method	Type	Low	High	Description
ALUMINUM	COA		21.9000	22.4000	DIETHYLALUMINUM CHLORIDE = DEAC
APPEAR	COA		0.0001	100.0000	TYPICAL, TYPICAL = 100
CHLORIDE	COA		29.2000	29.7000	CHLORIDE
CL/AL	COA		1.0000	1.0300	MOLAR RATIO
ETHANE	COA		98.0000	100.0000	ETHANE MOLAR%
HYDROGEN	COA		0.0001	0.2000	HYDROGEN MOLEAR% 0.2 MAX
IBUTANE	COA		0.0001	0.2000	IBUTANE MOLAR % 0.2MAX
NBUTANE	COA		0.0001	2.0000	2 % MAX NBUTANE MOLAR %

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Chemical	Supplier Name	City	State	Spec #
DICNIL-CYMP	VARIOUS			910153
Test	Method	Type	Low	High
DICNIL % COA			0.0100	100.0000 .
Chemical	Supplier Name	City	State	Spec #
DIENE RUBBER	FIRESTONE	LAKE CHARLES	LA	910189
Test	Method	Type	Low	High
DIENE COA			1.1000	2.0000 BFG PREAPPROVES THIS MATERIAL.
Chemical	Supplier Name	City	State	Spec #
DMA	AIR PRODUCTS	DECATUR	AL	910068
Test	Method	Type	Low	High
%DMA COA			99.0000	100.0000 DMA 99%min
Chemical	Supplier Name	City	State	Spec #
DMA	AIR PRODUCTS.	LEHIGH VALLEY	PA	910069
Test	Method	Type	Low	High
% DMA COA			99.0000	100.0000 dma 99% min
Chemical	Supplier Name	City	State	Spec #
DMA	ACCRON	SPRING	TX	910210
Test	Method	Type	Low	High
DMA% COA			99.0000	100.0000 .
Chemical	Supplier Name	City	State	Spec #
DMA	SHELL CHEMICAL CO	DEER PARK	TX	910207
Chemical	Supplier Name	City	State	Spec #
DMF	AIR PRODUCTS	DECATUR	AL	910033
Test	Method	Type	Low	High
DMF % COA			99.9000	100.0000 99.9% min, 500ppm water max
WATER % COA			0.0100	0.0500 .
Chemical	Supplier Name	City	State	Spec #
DPO-PENTABRM	DOW CHEMICAL	FREEPORT	TX	910179
Test	Method	Type	Low	High
DPO % COA			99.0000	100.0000 DPO %
Chemical	Supplier Name	City	State	Spec #
EDC	OCCIDENTAL CHEMICAL	BAYPORT	TX	910087
Test	Method	Type	Low	High
EDC % COA			99.9400	100.0000 99.95% min

Chemical	Supplier Name	City	State	Spec #	
EDC	VARIOUS			910114	
Test	Method	Type	Low	High	Description
%EDC	COA		99.9400	100.0000	EDC raw material for TA production

Chemical	Supplier Name	City	State	Spec #	
EMULS-MOLNTE	WITCO	MEMPHIS	TX	910177	
Test	Method	Type	Low	High	Description
PERFORM	DICK FRA		0.0100	2.0000	.

Chemical	Supplier Name	City	State	Spec #	
EPAC	VARIOUS			910120	
Test	Method	Type	Low	High	Description
BFG OK'D	none		1.0000	3.0000	1 = no / 2 = yes bfg approved

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Chemical	Supplier Name	City	State	Spec #
ETHANOX 330	VARIOUS			910102
Test	Method	Type	Low	High
APPEAR	COA		10.0000	101.0000
PURITY	COA		98.0000	100.0000
SETPOINT	COA		154.0000	2000.0000
Description APPEARANCE = WHITE TO LIGHT STRAW CRYSTALS, 100 = YES %PURITY 154 MIN.				

Chemical	Supplier Name	City	State	Spec #
ETHYLENE OXD	VARIOUS			910093
Test	Method	Type	Low	High
%E.O.	from COA		99.5000	100.0000
%WATER	from COA		0.0100	0.0300
Description 99.5% min Ethylene Oxide, 300 PPM max water %moisture in EO				

Chemical	Supplier Name	City	State	Spec #
FERRIC CHLRD	VARIOUS			910182
Test	Method	Type	Low	High
FECL %	COA		96.0000	100.0000
FERUS CL	COA		0.0100	3.0000
IMPURS %	COA		0.0100	1.0000
Description .				

Chemical	Supplier Name	City	State	Spec #
FMC STEP 4	FMC CORP APG	BALTIMORE	MD	910129
Test	Method	Type	Low	High
STEP 4	COA	N	0.0000	2.0000
Description CUSTOMER APPROVED PRODUCT =2, 1= NOT APPROVED				

Chemical	Supplier Name	City	State	Spec #
FMC-80-1				910149
Chemical	Supplier Name	City	State	Spec #
FORMALDEHYDE	DYNEA			910211

Test	Method	Type	Low	High	Description
FORM %	coa		44.5000	45.5000	.
MEOH, %	COA		4.5000	6.0000	.

Chemical	Supplier Name	City	State	Spec #
FORMALDEHYDE	NESTE RESINS	WINNFIELD	LA	910191
Test	Method	Type	Low	High
FORM %	COA		44.5000	45.5000
MEOH %	COA		4.5000	6.0000
Description FORMALDEHYDE				

Chemical	Supplier Name	City	State	Spec #
FORMALDEHYDE	GEORGIA PACIFIC	TAYLORSVILLE, MS	MS	910066
Test	Method	Type	Low	High
FORM %	COA		44.5000	45.5000
Description 44.5 - 45.5% formaldehyde / 4.5-6% Meoh				

MEOH % COA 4.5000 6.0000 .

Chemical	Supplier Name	City	State	Spec #	
FORMALDEHYDE	SPURLOCK ADHESIVES			910065	
Test	Method	Type	Low	High	Description
FORM	% COA		44.5000	45.5000	44.5 - 45.5 Formaldehyde, 4.5 - 6% Meoh
MEOH	% COA		4.5000	6.0000 .	

Chemical	Supplier Name	City	State	Spec #	
FORMIC, CYCLA	VARIOUS			910201	
Test	Method	Type	Low	High	Description
FORMIC % COA		G	85.0000	0.0000 .	

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Chemical	Supplier Name	City	State	Spec #
HCL	VULCAN	BIRMINGHAM	AL	910026
Test	Method	Type	Low	High
HCL	% COA		31.5000	34.0000
Description 31.5 - 34% HCL				
Chemical	Supplier Name	City	State	Spec #
HCL (ANHYDR.)	VARIOUS			910106
Test	Method	Type	Low	High
HCL/PURE	COA		99.0000	100.0000
Description 99% Min. anhydrous for unit 5				
Chemical	Supplier Name	City	State	Spec #
HEPTNE DIR	CONE SOLVENTS	MEMPHIS	TN	910083
Test	Method	Type	Low	High
WATER	% COA		0.0100	0.1000
Description 0.1% water max				
Chemical	Supplier Name	City	State	Spec #
HEPTNE BFG	CONE SOLVENTS	MEMPHIS	TN	910084
Test	Method	Type	Low	High
IBP D F.	COA		195.0000	205.0000
WATER	% COA		0.0100	0.1000
Description initial boiling point				
Chemical	Supplier Name	City	State	Spec #
HYDROGEN	PRAXAIR	MCINTOSH	AL	910086
Test	Method	Type	Low	High
HYDRO	% COA		99.9000	100.0000
Description 99.9% min.				
Chemical	Supplier Name	City	State	Spec #
IPA-CYMP	CONE SOLVENTS	MEMPHIS	TN	910150
Test	Method	Type	Low	High
IPA %	COA		99.0000	100.0000
Description IPA FOR CYMP 99.0 MINIMUM				
Chemical	Supplier Name	City	State	Spec #
ISOMIBK STAM	CONE SOLVENTS	MEMPHIS	TN	910070
Test	Method	Type	Low	High
WATER	% COA		0.0100	0.4000
Description 0.4% water max				
Chemical	Supplier Name	City	State	Spec #
ISOMIBK STAM	UNION CARBIDE	CHARLESTON	WV	910071
Test	Method	Type	Low	High
WATER	% COA		0.0100	0.4000
Description 0.4% water max				
Chemical	Supplier Name	City	State	Spec #
ISOPHORONE	CONE SOLVENTS	MEMPHIS	TN	910038

Test	Method	Type	Low	High	Description
WATER	% COA		0.0100	0.5000	0.5% water max

Chemical	Supplier Name	City	State	Spec #
ISOPHORONE	UNION CARBIDE	CHARLESTON	WV	910067

Test	Method	Type	Low	High	Description
WATER	% COA		0.0100	0.5000	0.5% water max

Chemical	Supplier Name	City	State	Spec #
ISOPHORONE	ACETO AGRICULTURAL CHEMS.	LAKE SUCCESS,	NY	910116

Test	Method	Type	Low	High	Description
WATER, % COA			0.0100	0.5000	.

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Chemical	Supplier Name	City	State	Spec #
ISOPHORONE	VARIOUS			910112

Test	Method	Type	Low	High	Description
WATER	coa		0.0010	0.5000	0.5% WATER MAX FROM COA

Chemical	Supplier Name	City	State	Spec #
LIME	BRAVO LIME COMPANY	SAGINAW,	AL	910050

Test	Method	Type	Low	High	Description
HYDRATED COA			1.0000	3.0000	Hydrated grade/ 1 = no, 2 = yes

Chemical	Supplier Name	City	State	Spec #
M-680	CONE SOLVENTS	MEMPHIS	TN	910036

Test	Method	Type	Low	High	Description
WATER % COA			0.0101	0.5000	0.5% water max

Chemical	Supplier Name	City	State	Spec #
MESITYL OXD.	HOECHST-CELANESE	PAMPA	TX	910047

Test	Method	Type	Low	High	Description
WATER % COA			0.0100	0.5000	0.5% water max

Chemical	Supplier Name	City	State	Spec #
METHANOL	CHEMTECH	ST LOUIS,	MO	910113

Test	Method	Type	Low	High	Description
MEOH % COA			99.0000	100.0000	99.0 % MINIMUM

Chemical	Supplier Name	City	State	Spec #
METHANOL	METHANEX	MEDICINE HAT, ALB, CANADA		910030

Test	Method	Type	Low	High	Description
MEOH % COA			99.0000	100.0000	99.% Meoh min

Chemical	Supplier Name	City	State	Spec #
METHANOL, CYC	CONE SOLVENTS	MEMPHIS	TN	910196

Test	Method	Type	Low	High	Description
MEOH, % COA		G	99.0000	0.0000	.

Chemical	Supplier Name	City	State	Spec #
METHANOL\TA	CONE SOLVENTS	MEMPHIS	TN	910168

Test	Method	Type	Low	High	Description
ASSAY % COA			99.0000	100.0000	.
IMPURS MS-1			1.0000	2.0000	.
WATER % COA			0.0100	0.2000	.

Chemical	Supplier Name	City	State	Spec #
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Test	Method	Type	Low	High	Description
METHNOL\FMC CONE SOLVENTS					
% MEOH	COA		85.0000	100.0000	.
%H2O	COA		0.0100	5.0000	.

TN

910137

Chemical	Supplier Name	City	State	Spec #	
METHOL-DOVER CONE SOLVENTS					
Test	Method	Type	Low	High	Description
ASSAY %	COA		95.0000	100.0000	.
H2O PPM	COA		0.0100	200.0000	.

TN

910162

Chemical	Supplier Name	City	State	Spec #	
METHYLATECYC DEGUSSA					
Test	Method	Type	Low	High	Description
NAMETHL%	COA		29.5000	31.0000	.

TN

910198

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Chemical	Supplier Name	City	State	Spec #
MIXED ACID	EL DORADO CHEMICAL	ST. LOUIS	MO	910089

Test	Method	Type	Low	High	Description
H2SO4 %	COA		64.0000	66.5000	Sulfuric 64 - 66.5 / Nitric = 33 -35%
HNO3 %	COA		33.0000	35.0000	Nitric
IF WATER			0.0100	1.0000	.
IS NEG.			0.0100	1.0000	.
REJECT!!			0.0100	1.0000	.
THE SHPM			0.0100	1.0000	.
WATER %	GAM-2		0.0001	0.5000	.

Chemical	Supplier Name	City	State	Spec #
MOLINATE	HUNGARY			910178

Test	Method	Type	Low	High	Description
MOLINT %	COA	G	96.0000	100.0000	MOLINATE %

Chemical	Supplier Name	City	State	Spec #
MOLYB CAT.	VARIOUS			910118

Test	Method	Type	Low	High	Description
BFG OK'D	none		1.5000	3.0000	1 = no / 2 = yes bfg approved

Chemical	Supplier Name	City	State	Spec #
MORPHOLINE	VARIOUS			910098

Test	Method	Type	Low	High	Description
%MORPH	COA		99.0000	100.0000	%morpholine 99% min

Chemical	Supplier Name	City	State	Spec #
N-PROPANOL	VARIOUS			910166

Test	Method	Type	Low	High	Description
DIST.RNG	COA		96.0000	98.0000	distillation range of 96-98C max is only spec.

Chemical	Supplier Name	City	State	Spec #
N-PROPYL ALC	CONE SOLVENTS	MEMPHIS	TN	910170

Test	Method	Type	Low	High	Description
PURITY	dry base		99.9000	100.0000	purity on dry basis (without water)
WATER	by wt.		0.0001	0.1000	water 0.1% max

Chemical	Supplier Name	City	State	Spec #
NADONE	CONE SOLVENTS	MEMPHIS	TN	910037

Test	Method	Type	Low	High	Description
WATER	COA		0.0100	0.5000	0.5% max

Chemical	Supplier Name	City	State	Spec #
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NAOH 20	CHEMTECH.		MEMPHIS		
Test	Method	Type	Low	High	Description
NAOH	COA		19.0000	21.0000	19 - 21% Naoh

TN

910077

Chemical	Supplier Name		City		
NAOH 50	VULCAN		BIRMINGHAM		
Test	Method	Type	Low	High	Description
NAOH	% COA		48.0000	51.0000	48 - 51% Naoh

State

Spec #

AL

910074

Chemical	Supplier Name		City		
NAOH 50	LA ROCHE INDUSTRIES		GRAMERCY		
Test	Method	Type	Low	High	Description
NAOH	% COA		48.0000	51.0000	48 - 51% Naoh

State

Spec #

LA

910024

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Chemical	Supplier Name	City	State	Spec #
NAOH 50	IDEAL	MEMPHIS	TN	910072
Test	Method	Type	Low	High
NAOH	% COA		48.0000	51.0000
Description 48 - 51% Naoh				
Chemical	Supplier Name	City	State	Spec #
NAOH 50	CONE\CO FORMOSA PLASTICS	POINT COMFORT	TX	910073
Test	Method	Type	Low	High
NAOH	% COA		48.0000	51.0000
Description 48 - 51% Naoh				
Chemical	Supplier Name	City	State	Spec #
NAOH 50	CHEMTECH.	MEMPHIS	TN	910107
Test	Method	Type	Low	High
NAOH	% COA		48.0000	51.0000
Description 48 - 51% Naoh				
Chemical	Supplier Name	City	State	Spec #
NAOH 50 %RAY	PIONEER	SOMEWHERE ELSE		910023
Test	Method	Type	Low	High
IRON,PPM	COA		0.0100	5.0000
NACL,PPM	COA		0.0100	50.0000
NAOH	% COA		48.0000	51.0000
Description 48 - 51% Naoh,				
Chemical	Supplier Name	City	State	Spec #
NAOH-CYMP	CONE SOLVENTS	MEMPHIS	TN	910152
Test	Method	Type	Low	High
NAOH %	COA		0.0100	100.0000
Description .				
Chemical	Supplier Name	City	State	Spec #
NAOH-DOVER	VARIOUS			910158
Test	Method	Type	Low	High
H2O PPM	COA		0.0100	200.0000
NAOH%	COA		99.9000	100.0000
Description .				
Chemical	Supplier Name	City	State	Spec #
NAOH-MEM-ACI	VULCAN	BIRMINGHAM	AL	910088
Test	Method	Type	Low	High
IRON PPM	COA		0.0100	5.0000
NAOH	% COA		49.0000	51.0000
Description 5 ppm Max Iron				
Description 49 - 51 % Naoh				
Chemical	Supplier Name	City	State	Spec #
NAOH-RAYON50	BRENNTAG MIDSOUTH			910214
Test	Method	Type	Low	High
FE, PPM	coa		0.0100	5.0000
Description .				

NACL, PPM	coa	0.0100	50.0000	.
NAOH %	coa	48.0000	51.0000	.

Chemical	Supplier Name	City	State	Spec #	
NAOH-SOLID	CHEMTECH	ST LOUIS,	MO	910075	
Test	Method	Type	Low	High	Description
NAOH	COA		95.0000	100.0000	95% Naoh Min

Chemical	Supplier Name	City	State	Spec #	
NAOH50	VERTEX	MEMPHIS	TN	910175	
Test	Method	Type	Low	High	Description
NAOH %	COA		48.0000	51.0000	.

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Chemical	Supplier Name	City	State	Spec #
NICKEL	VARIOUS			910110

Test	Method	Type	Low	High	Description
RAINEY?	OR RQ?		1.0000	3.0000	SPONGE, RAINEY NICKEL

1 = NO, 2 = YES

Chemical	Supplier Name	City	State	Spec #
NICKEL CAT.	ACTIVATED METALS	SEVIERVILLE	TN	910117

Test	Method	Type	Low	High	Description
NICKEL	COA		2.0000	2.0000	1 for no,, 2 for yes

Chemical	Supplier Name	City	State	Spec #
NIT.ACID\FMC	EL DORADO CHEMICAL	ST. LOUIS	MO	910138

Test	Method	Type	Low	High	Description
% H2O	COA		0.0001	0.0001	.
% HNO3	COA		60.0000	85.0000	.
% OLEUM	COA		0.5000	2.5000	.

Chemical	Supplier Name	City	State	Spec #
NITRIC ACID	ELDORADO CHEMICAL	EL DORADO	AR	910007

Test	Method	Type	Low	High	Description
NITRIC % COA			98.0000	100.0000	98% Min

Chemical	Supplier Name	City	State	Spec #
NITRIC ACIF	ELDORADO CHEMICAL	EL DORADO	AR	910156

Test	Method	Type	Low	High	Description
IRON,PPM	COA		0.0100	50.0000	Iron, ppm
NITRIC % COA			98.0000	100.0000	.

Chemical	Supplier Name	City	State	Spec #
NITROGEN	AIR PRODUCTS	DECATUR	AL	910008

Test	Method	Type	Low	High	Description
OXYG PPM	COA		0.0100	3.0000	3 ppm Oxygen max
WATERPPM	COA		0.0100	3.0000	3 PPM Water max

Chemical	Supplier Name	City	State	Spec #
NITROGEN	PRAXAIR	MCINTOSH	AL	910186

Test	Method	Type	Low	High	Description
H2O,PPM	COA		0.0100	5.0000	.
O2, PPM	COA		0.0100	8.0000	.

Chemical	Supplier Name	City	State	Spec #
NITROMETHANE	AUSTIN CHEMICAL			910128

Test	Method	Type	Low	High	Description

% NM COA 99.5000 100.0000 % Nitromethane

Chemical	Supplier Name	City	State	Spec #	
NITROMETHANE	ACETO AGRICULTURAL CHEMS	LAKE SUCCESS	NY	910192	
Test	Method	Type	Low	High	Description
NITMET %	COA		99.5000	100.0000	.

Chemical	Supplier Name	City	State	Spec #	
NITROMETHANE	WEGO	GREAT NECK	NY	910032	
Test	Method	Type	Low	High	Description
NM %	COA		99.5000	100.0000	99.5% min

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Chemical	Supplier Name	City	State	Spec #
NITROPROPANE	ANGUS			910215
Test	Method	Type	Low	High
1-NP %	COA		99.0000	100.0000
H2O %	COA		0.0100	0.2000
Description				
Chemical	Supplier Name	City	State	Spec #
NORCAT	VARIOUS			910119
Test	Method	Type	Low	High
BFG OK'D	none		1.5000	3.0000
Description	1 = no / 2 = yes bfg approved			
Chemical	Supplier Name	City	State	Spec #
ODCB	SOLUTIA	SAUGET	IL	910130
Test	Method	Type	Low	High
ODCB %	COA		98.5000	100.0000
PDCB %	COA		0.0100	1.0000
Description	ODCB %			
	PDCB %			
Chemical	Supplier Name	City	State	Spec #
ODCB	STANDARD CHLORINE	DELAWARE CITY,	DE	910009
Test	Method	Type	Low	High
ODCB %	COA		98.5000	100.0000
PDCB %	COA		0.0100	1.0000
Description	98.5% odcb min, 1% pdcb max			
Chemical	Supplier Name	City	State	Spec #
ODCB	METACHEM\STANDARD	DELAWARE CITY	DE	910164
Test	Method	Type	Low	High
ODCB %	COA		98.5000	100.0000
PDCB,%	COA		0.0100	1.0000
Description				
Chemical	Supplier Name	City	State	Spec #
ODCB	PPG INDUSTRIES	NATRIUM	WV	910046
Test	Method	Type	Low	High
ODCB %	COA		98.4999	100.0000
PDCB %	COA		0.0100	1.0000
Description	98.5 % min ODCB, 1% max pdcb			
	98.5%min ODCB/ 1.0%PDCB max			
Chemical	Supplier Name	City	State	Spec #
ODCB	MONSANTO	SAUGET	IL	910010
Test	Method	Type	Low	High
ODCB %	COA		98.5000	100.0000
PDCB %	COA		0.0100	1.0000
Description	98.5% min odcb, 1% max pdcb			
Chemical	Supplier Name	City	State	Spec #
OLEUM \FMC	FMC	GREEN RIVER	WY	910139

Test	Method	Type	Low	High	Description
% SULF.	COA		104.0000	105.5000	.

Chemical	Supplier Name	City	State	Spec #
ORDRAM	SYNGENTA	BUCKS	AL	910203

Test	Method	Type	Low	High	Description
ORDRAM %	COA		96.0000	100.0000	MOLINATE FOR ORDRAM

Chemical	Supplier Name	City	State	Spec #
PALLIDIUM	VARIOUS			910171

Test	Method	Type	Low	High	Description
% PALLID %			5.0000	100.0000	5% min. Pallidium on Carbon
CARBON	Number		1940.0000	10000.0000	Carbon number 1940 SWR

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Chemical	Supplier Name	City	State	Spec #
PAM	KURRARRAY	TOKYO	JP	910029
Test	Method	Type	Low	High
PAM %	COA		97.0000	100.0000 97% min
Chemical	Supplier Name	City	State	Spec #
PBA	NIPA HARDWICKE	ELGIN	SC	910025
Test	Method	Type	Low	High
PBA %	COA		98.5000	100.0000 98.5% min
Chemical	Supplier Name	City	State	Spec #
PBALD	AMERIBROM	BEER SHEVA, ISRAEL		910051
Test	Method	Type	Low	High
PBALD %	COA		97.0000	100.0000 97% min
Chemical	Supplier Name	City	State	Spec #
PCE	SAFETY KLEEN	Hebron	oh	910217
Test	Method	Type	Low	High
H2O, PPM	coa		0.0100	200.0000 .
Chemical	Supplier Name	City	State	Spec #
PCL3	A AND W AMERICAS	CHARLESTON	SC	910049
Test	Method	Type	Low	High
PCL3 %	COA		99.0000	100.0000 99% min
Chemical	Supplier Name	City	State	Spec #
PCL3	VARIOUS			910095
Test	Method	Type	Low	High
%PCL3	from COA		99.5000	100.0000 % PCL3 for Eth 99.5% min
Chemical	Supplier Name	City	State	Spec #
PE-DOVER	PERSTORP			910160
Test	Method	Type	Low	High
ASSAY, %	COA		99.0000	100.0000 .
H2O, PPM	COA		0.0100	200.0000 .
Chemical	Supplier Name	City	State	Spec #
PENNSPRAY 70	PENNZOIL CO.	SHREVEPORT	LA	910148
Test	Method	Type	Low	High
NAME	NAME		1.0000	3.0000 1 = NAME DOES NOT MATCH 2 = NAME MATCHES COA
Chemical	Supplier Name	City	State	Spec #
PENNZPAR 71	ATLAS PROCESSING CO			910052

Test	Method	Type	Low	High	Description
CHK GRDE	COA		1.0000	3.0000	1 = bad, 2 = good, ok

Chemical	Supplier Name	City	State	Spec #
PERKLONE D	ICI CHEMICALS & POLYMERS	WILMINGTON	DE	910155

Test	Method	Type	Low	High	Description
H2O, PPM	COA		0.0100	200.0000	.

Chemical	Supplier Name	City	State	Spec #
PHENOL-DOVER	ARISTECH			910157

Test	Method	Type	Low	High	Description
ASSAY%	COA		99.0000	100.0000	.
H2O, PPM	COA		0.0100	200.0000	.

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Raw Materials Acceptance Specs

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Chemical	Supplier Name	City	State	Spec #
PLATINUM CAT	JOHNSON MATTHEY	WEST DEPTFORD	NJ	910042
Test Method Type	Low	High	Description	
PERFORM TEST	1.0000	3.0000	1=fail, 2=pass	

Chemical	Supplier Name	City	State	Spec #
PROP ANHYD.	EASTMAN CHEMICAL CO.	KINGSPORT	TN	910022
Test Method Type	Low	High	Description	
ANHYD % COA	98.0000	100.0000	98%min	

Chemical	Supplier Name	City	State	Spec #
PROP. ACID	HOECHST-CELANESE	PAMPA	TX	910041
Test Method Type	Low	High	Description	
PROP % COA	98.0000	100.0000	98%min	

Chemical	Supplier Name	City	State	Spec #
PROP. ACID	UNION CARBIDE	CHARLESTON	WV	910020
Test Method Type	Low	High	Description	
PROP % COA	98.0000	100.0000	98%min	

Chemical	Supplier Name	City	State	Spec #
PROP. ACID	EASTMAN CHEMICAL	LONGVIEW	TX	910013
Test Method Type	Low	High	Description	
PROP % COA	98.0000	100.0000	98%min	

Chemical	Supplier Name	City	State	Spec #
PTPM-TETRA	VARIOUS			910181
Test Method Type	Low	High	Description	
PTPM % COA	35.0000	72.0000	.	

Chemical	Supplier Name	City	State	Spec #
R118118	ZENECA	UNITED KINGDOM		910014
Test Method Type	Low	High	Description	
R118118% COA	33.0000	38.0000	R118118% is 33% min-38% max	
TOL, % COA	0.0000	0.0000	.	

Chemical	Supplier Name	City	State	Spec #
RUBBER	VARIOUS			910101
Test Method Type	Low	High	Description	
ASH COA	0.0001	0.2000	ALKYL LITHIUM POLYMERIZED POLYBUTADIENE = RUBBER	
COLOR COA	0.0001	10.0000	APHA ON COA COLOR	
DIS.TIME COA	0.0001	4.0000	DISSOLVING TIME = 4 HOURS MAX	
MOONEY V COA	47.0000	57.0000	ON COA MOONEY VISCOSITY	

SOL. VIS COA	147.0000	177.0000	SOLUTION VISCOSITY OF 5.43% IN TOLUENE
STABILZR COA	0.5200	1.0800	STABILIZER
TOL.INS COA	0.0001	0.0100	TOLUENE INSOLUBLES ON COA
TURBIDIT COA	0.0001	0.0001	TURBIDITY, SPEC. = CLEAR
VIS.GEL COA	0.0001	0.0001	VISUAL GELS = NIL IS SPEC.
VOL.MAT	0.0001	0.6000	VOLATILE MATTER

Chemical	Supplier Name	City	State	Spec #
SALT	MORTON - SALT (CONE SOLV)	MEMPHIS	TN	910091
Test	Method	Type	Low	High
SALT	% COA		99.5000	100.0000
			Salt % 99.5% min	

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Raw Materials Acceptance Specs

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Chemical	Supplier Name	City	State	Spec #
SALT	CARGILL	MEMPHIS	TN	910027

Test	Method	Type	Low	High	Description
SALT	% COA		99.0000	100.0000	Salt % = 99% min

Chemical	Supplier Name	City	State	Spec #
SICL4	VARIOUS			910121

Test	Method	Type	Low	High	Description
PURITY	COA/%wt		99.5000	100.0000	the purity is expressed in %weight, 99.5%minimum. Silvestra

Chemical	Supplier Name	City	State	Spec #
SOD.CARB\FMC	IDEAL	MEMPHIS	TN	910140

Test	Method	Type	Low	High	Description
% ASSAY	COA		99.2000	100.0000	.
% H2O	COA		0.0100	0.2500	.
% NAO2	COA		58.0000	100.0000	.
GRADE100	COA		0.0100	2.0000	.
GRADE160	COA		0.0100	2.0000	.

Chemical	Supplier Name	City	State	Spec #
SODA ASH	IDEAL	MEMPHIS	TN	910053

Test	Method	Type	Low	High	Description
MESH 100	COA		1.0000	3.0000	80-100 mesh 1 = no, 2 = yes

Chemical	Supplier Name	City	State	Spec #
SODA ASH	VARIOUS			910122

Chemical	Supplier Name	City	State	Spec #
STEP 3\DMF	FMC CORP APG	BALTIMORE	MD	910132

Test	Method	Type	Low	High	Description
% ACTIVE	COA		17.0000	20.0000	.

Chemical	Supplier Name	City	State	Spec #
STEPFAC 8170	STEPAN	WINDER	GA	910035

Test	Method	Type	Low	High	Description
PERFORM	PROP-7		1.0000	3.0000	1 = fail, 2 = pass

Chemical	Supplier Name	City	State	Spec #
STEROLS	ARCHER DANIEL MIDLAND	DECATUR	GA	910172

Test	Method	Type	Low	High	Description
STEROLS%	COA		90.0000	100.0000	TOTAL FREE STEROLS

Chemical	Supplier Name	City	State	Spec #
STEROLS	HENKLE CHEMICALS			910173

Test	Method	Type	Low	High	Description
STEROLS%	COA		90.0000	100.0000	.

Chemical	Supplier Name	City	State	Spec #
SULF ACD ACI	ELDORADO CHEMICAL	EL DORADO	AR	910079

Test	Method	Type	Low	High	Description
IRON PPM	COA		0.0100	40.0000	Iron ppm is 40 max, Sulf % is 93% min, Water % 7 max
SULF	% COA		98.0000	100.0000	Sulfuric Acid %

Chemical	Supplier Name	City	State	Spec #
SULF ACD DCA	ELDORADO CHEMICAL	EL DORADO	AR	910080

Test	Method	Type	Low	High	Description
SULF	% COA		98.0000	100.0000	Sulf % is 98% min

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Raw Materials Acceptance Specs

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Chemical	Supplier Name	City	State	Spec #
SULF ACD DIR	ELDORADO CHEMICAL	EL DORADO	AR	910081

Test	Method	Type	Low	High	Description
SULF	% COA		93.0000	100.0000	Sulf % is 93% min

Chemical	Supplier Name	City	State	Spec #
SULF ACD TA	ELDORADO CHEMICAL	EL DORADO	AR	910082

Test	Method	Type	Low	High	Description
SULF	% COA		93.0000	100.0000	sulf % = 93% min

Chemical	Supplier Name	City	State	Spec #
SULF.ACD\FMC	CHEMTECH.	MEMPHIS	TN	910141

Test	Method	Type	Low	High	Description
% ASSAY	COA		93.0000	100.0000	.

Chemical	Supplier Name	City	State	Spec #
SULFURIC EO	VARIOUS			910096

Test	Method	Type	Low	High	Description
%ACTIVE	FROM COA		97.0000	100.0000	SULFURIC FOR SCRUBBER, % Active is 97% min

Chemical	Supplier Name	City	State	Spec #
T-500 SOLVNT	MOBIL CHEMICAL	CHALMETTE	LA	910054

Test	Method	Type	Low	High	Description
CHK GRDE	COA		1.0000	3.0000	1 = fail, 2 = pass

Chemical	Supplier Name	City	State	Spec #
TAP-ANTI BLZE	A AND W AMERICAS	CHARLESTON	SC	910185

Test	Method	Type	Low	High	Description
COA	GRADE	N	0.0000	0.0000	coa for antiblaze

Chemical	Supplier Name	City	State	Spec #
TEA FOR 2AB	ATOFINA	Oaksville		910216

Test	Method	Type	Low	High	Description
TEA %	coa		99.0000	100.0000	.
WATER, %	coa		0.0100	0.1000	,

Chemical	Supplier Name	City	State	Spec #
TENNECO AV-1	CONE SOLVENTS	MEMPHIS	TN	910109

Test	Method	Type	Low	High	Description
AV-1 GRD			1.0000	3.0000	1 = is not the right grade, 2 = is the right grade

Chemical	Supplier Name	City	State	Spec #
TEPA	VARIOUS			910124

Test	Method	Type	Low	High	Description
%TEPA	coa		90.0000	100.0000	tepa for dca storage

Chemical	Supplier Name	City	State	Spec #
THIONYL CHLD	BAYER CHEMICALS	BAYTOWN	TX	910017

Test	Method	Type	Low	High	Description
THIOCHL%	COA		99.0000	100.0000	99% min

Chemical	Supplier Name	City	State	Spec #
TOLUENE	EXXON	HOUSTON	TX	910019

Test	Method	Type	Low	High	Description
TOLUEN %	COA		97.0000	100.0000	% Tol 97% min, % water .05 max
WATER %	COA		0.0100	0.0500	0.05%max

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Raw Materials Acceptance Specs

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Chemical	Supplier Name	City	State	Spec #
TOLUENE/FMC	FMC	GREEN RIVER	WY	910142
Test	Method	Type	Low	High
SULFEN%	COA	N	0.0000	0.0000 .
Description				
Chemical	Supplier Name	City	State	Spec #
TOXIMUL 804	STEPAN	WINDER	GA	910016
Test	Method	Type	Low	High
PERFORM	PROP-7		1.0000	3.0000 1 = fail, 2= pass
Description				
Chemical	Supplier Name	City	State	Spec #
TPP-DOVER	DOVER CHEMICAL	DOVER	OH	910159
Test	Method	Type	Low	High
ASSAY %	COA		97.0000	100.0000 Assay %
COLOR	COA		0.0100	50.0000 .
Description				
Chemical	Supplier Name	City	State	Spec #
TPP-TETRA	VARIOUS			910180
Test	Method	Type	Low	High
TPP %	COA		28.0000	65.0000 .
Description				
Chemical	Supplier Name	City	State	Spec #
XYLENE	CONE SOLVENTS	MEMPHIS	TN	910193
Test	Method	Type	Low	High
XYLENE % coa		G	99.5000	0.0000 .
Description				
Chemical	Supplier Name	City	State	Spec #
XYLENE-CYCLA	CONE SOLVENTS	MEMPHIS	TN	910195
Test	Method	Type	Low	High
XYLENE % COA		G	99.5000	0.0000 .
Description				
Chemical	Supplier Name	City	State	Spec #
XYLENE-DOVER	CONE SOLVENTS	MEMPHIS	TN	910161
Test	Method	Type	Low	High
ASSAY %	COA		95.0000	100.0000 .
H2O,PPM	COA		0.0100	200.0000 .
Description				



Facsimile Transmittal

To: Serge Ravet

Fax: 9-011-33-472852066

From: Geoff Pratt

Date: 10/26/99

Re: Cyclanilide Meeting December Pages: 1
14,15

Phon 901-684-5373
e:

Cc: David Guffey
Chris McGee

☐ Urgent ☐ For Review

☐ Please
Comment

☐ Please
Reply

☐ Please
Recycle

Dear Serge,

The meeting with Pierre LeRoy on December 14, 15 is ok for us. We should have enough time to complete some preliminary laboratory trials prior to the meeting. You will provide us with 1 kg samples each of CPDM and 2,4 DCA, and analytical procedures as soon as possible so that we can proceed with the trials. We will use the sulfuric acid method in the trials.

In the meantime you will send the new secrecy agreement, which when executed will allow you to send the technical package from Degussa.

Regards

A handwritten signature in black ink, appearing to read "Geoff Pratt", written over a circular stamp.

Geoff Pratt

Cedar Chemical Corporation

5700 Poplar Avenue, Ste. 7414

Memphis, TN 38117

901-684-5373



Internal Correspondence

To: Chris McGee, Jim Rone
CC: A. Dinculescu
From: David C. Guffey
Date: 14 December 1999
RE: Cyclanilide 90946 Process—Process Technology Questions

Following are questions from the Rhone-Poulenc process for generation of RP-90946:

A. Coupling

1. What are purchase specs for Toluene (especially water content)?
2. Use mixed Xylenes instead of Toluene—No MeOH azeotrope. Issues?
3. How many theo stages req'd for Toluene/MeOH distillation?
4. What happens if MeOH left in reactor?
5. Third and last ¶'s of Section 5.1.5 of "Merit Note" Rev. 0, indicates final pot temp of 110°C for complete MeOH removal—is this a separate heat up step or a normal ramp-up of temperature during the final MeOH distillation?
6. When Na-CPMPA precipitates in solution—what is density and viscosity of resulting slurry?
7. Toluene/MeOH azeotrope waste or break azeotrope in Toluene recovery?
8. What is vacuum utilized for MeOH strip—controlled or FV?
9. Does Azeo strip require vacuum?
10. What increases/decreases the reaction of 2,4 DCA with the second ester group to form impurity n°6?

B. Hydrolysis

1. What are effects of too much / too little water?
2. Max Temperature listed as 100°C—what happens if temperature exceeded?
3. What is density and viscosity of resulting aqueous slurry?
4. Is there a rag layer in the decant process?
5. If there is a rag layer, does it go with the aqueous or organic phases?
6. Distillation column required for MeOH removal?
7. What happens if all MeOH not removed?

C. Acidification

1. Acidification step—stop before 1-1.5—what happens.
2. After acidification step—can we bring pH back to 4-5 from 1-1.5?

D. Isolation & Drying

1. Corrosion data for 316 stainless steel at pH 1-1.5?
2. Corrosion data for Hastelloy C-22 and/or C-276 at pH 1-1.5?
3. Bulk Density of Wet Solids from Centrifugation?
4. Bulk Density of Dry Solids?
5. What kind of dryer currently used? Operating conditions? Cp of the RP-90946?
6. What happens if dryer temperature exceeded?
7. What is melt point of solid?

8. Is the product thermally stable—R&D tests?

E. Toluene Recovery

1. What are details of toluene recovery—i.e. equipment utilized, operating conditions, stream compositions, recovered toluene specs, etc.
2. How many theo. stages required?
3. What is overall toluene recovery?

F. Waste Disposal

1. Typical composition of aqueous waste stream?
2. Typical composition of organic waste stream?

Raw materials supplied by Cedar and the cost of offsite waste treatment will be billed to you at our cost. You will note the high cost of sodium methoxide. We need to find a cheaper way to generate this item. We are assuming for this estimate that all waste and byproducts are revenue neutral.

New capital specific for this project is estimated to be \$300 – 600M depending upon which processing unit is finally chosen. For a three-year contract, we will not ask you to contribute to the capital directly. We will ask that you pay any non-amortized portion of the capital if you terminate the project before the contracted quantity of product is taken.

All of the above costs are represented in the attached exhibit. This is a preliminary estimate, which will be refined when we receive the commercial technology package. This estimate is sufficient to identify the key factors, which will impact your economics, with the most significant one being the productivity of our equipment. Productivity will be controlled also by your ability to supply the raw materials. You were going to check this supply capability.

I hope that this information is helpful. Please let me know if clarification is needed.

Regards,



Geoff Pratt

Cc: David Guffey
Joe Mancini
Chris McGee
Jim Rone
Randal Tomblin

7/14/99

RHONE POULENC CYCLANILIDE

	Base Case			Increased Productivity		
	Year	2001	2002	Year	2001	2002
	2000			2000		
Cedar Capital M-\$	750			625		
Plant Capacity M-Kgs	402			876		
Production M-Kgs	75	150	200	75	150	200
Production Time Days	58	132	180	21	58	81
Startup Time Days	30	14	7	30	14	7
Platn Prep. & CO Days	10	10	10	10	10	10
Total Days	98	156	197	61	82	98
Raw Materials \$3.56/kg	267	534	712	267	534	712
Waste Treatment 0 lb/kg	0	0	0	0	0	0
Price Inc. Capital Rec/Kg	25.59	20.49	19.45	17.71	12.61	11.57
Average 2000-2002		20.90			13.02	

Fee \$/day	
Startup	18
Normal	16

Raw Materials			
	kg/kg	\$/kg R	\$/kg Prod
Sod Methoxide 25%	2.14	1.46	3.11
Sulfuric	0.18	1.56	0.28
Toluene	0.62	0.26	0.16
Total			3.56

VERTAC CHEMICAL CORPORATION NEWS

Suite 2414 • 5100 Poplar • Memphis, TN 38137 • (901) 767-6851

FOR IMMEDIATE RELEASE

Contact: David Simmons
(901) 767-5748

Potassium nitrate (KNO_3) a specialty fertilizer manufactured by Vertac Chemical Corporation, is now being distributed in the Western United States, Western Canada, and parts of Mexico by Wilson & Geo. Meyer & Co., a leading agricultural chemical marketing firm.

The fertilizer, marketed under the trade name, Vicknite, is used on grapes, tomatoes, fruits and nuts, as well as vegetable and flower crops.

"Wilson & Geo. Meyer, with over 125 years of marketing experience, has sales offices in strategic locations throughout the West," said Niven Morgan, Jr., Vertac executive vice president. "Coordinating Western distribution through their organization will improve Vertac's position as the nation's dominant supplier of potassium nitrate."

"Agricultural consumers in the West will now have a more convenient source of supply for this high-quality specialty fertilizer. As a consequence we anticipate that consumption in this geographic region will increase appreciably in years to come."

All herbicide lines will continue to be distributed through Vertac's current network of sales and distribution centers.

(more)

AB0000064604

Potassium nitrate produced by Vertac also has important industrial applications, including its use as a critical ingredient in the production of glass for color television picture tubes. KNO_3 is used as a major component in heat-treating agents in the steel and aluminum industries. Its ability to absorb and transfer heat makes it an ideal candidate for utilization in solar energy plants.

Vertac's Vicksburg, Miss., plant is the only potassium nitrate manufacturing facility in the United States and one of only two in the world. In addition to the Vicksburg plant, Vertac has manufacturing facilities in Jacksonville and West Helena, Ark. Vertac is also the only domestic producer of Nitrogen Tetroxide (N_2O_4), a propellant ingredient used in the space shuttle and other rockets.

Wilson & Geo. Meyer & Co., specializes in national and international marketing of agricultural and industrial chemicals, plastics and raw materials for a number of manufacturers. The company maintains major offices in 11 Western states and sales offices in other areas.

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VERTAC CHEMICAL CORPORATION NEWS

Suite 2414 • 5100 Poplar • Memphis, TN 38137 • (901) 767-8851

FOR IMMEDIATE RELEASE

Contact: David Simmons
761-5748

VERTAC BUYS BUTOXONE BUSINESS

Vertac Chemical Corporation announced today the purchase of the Butoxone brand 2,4-DB broadleaf herbicide business from Rhone-Poulenc, Inc. The sale is effective immediately and includes all assets, other than plant equipment, such as labels, tradenames, process and formulation technology, toxicological and efficacy data, existing inventory, and marketing information.

Butoxone is a broadleaf herbicide used to control weeds in soybeans, peanuts, and alfalfa. On a cost performance basis, 2, 4-DB is the most economical broadleaf herbicide available to a grower. It offers a grower timing flexibility and can be tank mixed with other herbicides.

With the Butoxone purchase, Vertac adds another series of products to its rapidly expanding line of economical herbicides. Vertac President C. P. Bomar, Jr., comments, "Butoxone is a valuable addition to our arsenal of soybeans and peanut herbicides, allowing Vertac to offer the grower a well-rounded and economical weed control program. The purchase of the Butoxone business is the third in a continuing series of growth oriented acquisitions for Vertac."

Vertac's line of herbicides includes Premerge 3, General Weed Killer, Selective Weed Killer, and Weed-Rhap and Brush-Rhap 2,4-D products. In addition to Butoxone and Butoxone Ester, other new products introduced in 1983 are Premerge Plus, VERSAR brand MSMA and DSMA products, and the Bollseye, Broadside, and Phytar 560 series of Cacodylate products.

Vertac is a Memphis-based firm producing agricultural and industrial chemicals at plants located in Vicksburg, MS; Jacksonville, AR; and West Helena, AR. Vertac is also the only U. S. producer of nitrogen tetroxide, a fuel oxidizer used in the Space Shuttle and other rocket systems.

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VERTAC CHEMICAL CORPORATION NEWS

Suite 2414 • 5100 Poplar • Memphis, TN 38137 • (901) 767-6851

For Immediate Release

Contact: David Simmons
(901) 761-5748

VERTAC ANNOUNCES MSMA PLANT STARTUP

Vertac Chemical Corporation today announced the successful startup of the firm's new \$3 million MSMA herbicide facility located at its 600-acre Vicksburg, Mississippi, plant site.

An existing production unit was redesigned and expanded for the manufacture of MSMA (monosodium methane arsonate) and sodium cacodylate, a related product. According to Vertac President C. P. Bomar, Jr., the cost of the project is to be financed, in part, by Industrial Revenue Bonds authorized by the State of Mississippi.

MSMA, a broadleaf herbicide for weed control in cotton and industrial rights-of-way, will be marketed under the trade name, VERSAR. With shipments beginning in February, the product will be available in three concentrations as VERSAR 400, 600, and 660.

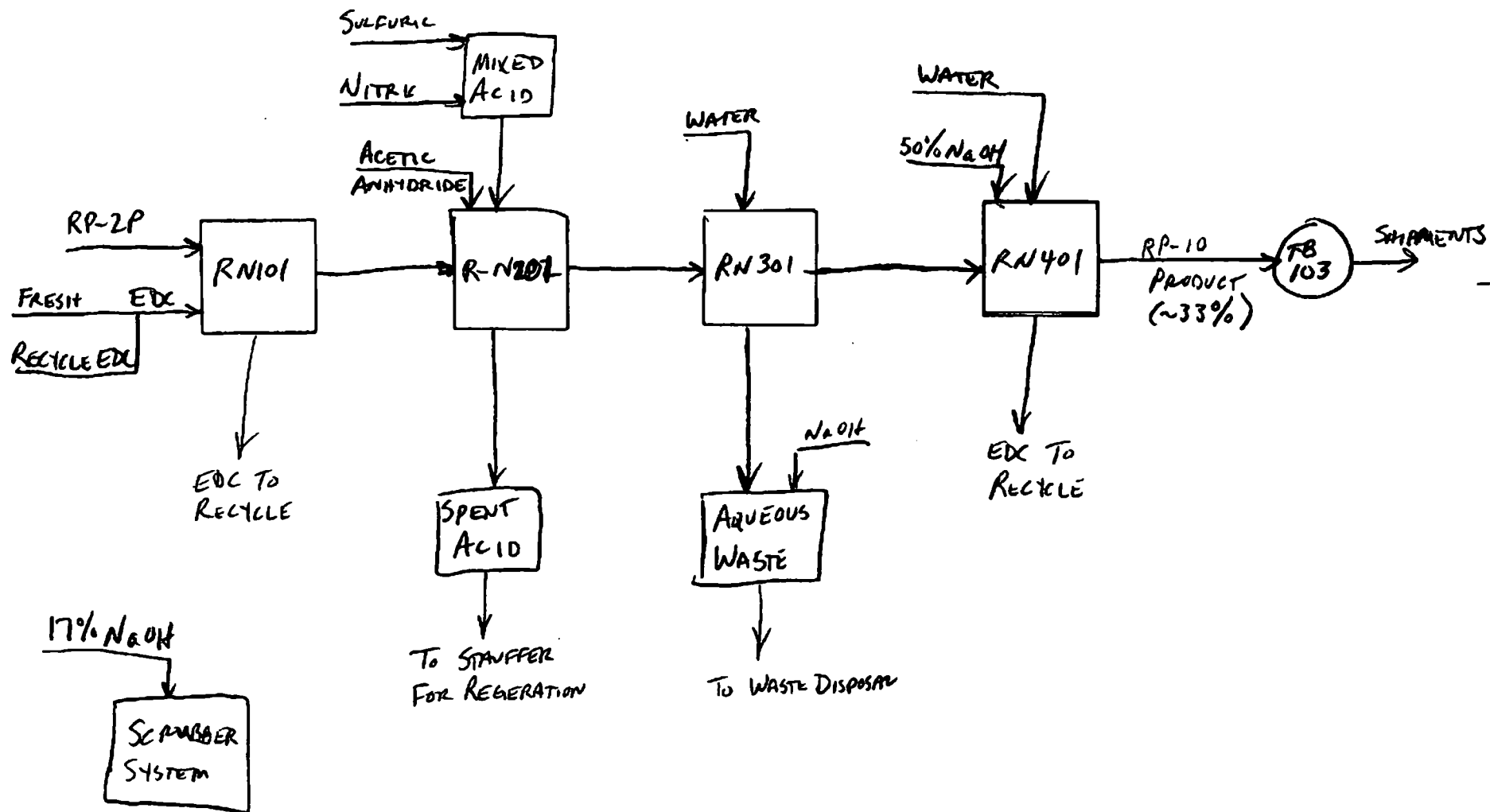
"The addition of the VERSAR product line is an important next step in Vertac's continuing expansion as a basic manufacturer and marketer of commodity agricultural chemicals," said Bomar. "In addition to Versar, Vertac has introduced Premerge Plus herbicide, and expanded our 2-4D production facility. With these moves we expect our total herbicide sales to increase by at least \$10 million in 1983. We have built a strong reputation as a quality producer of effective low-cost herbicides which are in particular demand because of today's agricultural economy", Bomar said.

Premerge Plus is a Vertac herbicide for weed control in soybeans and peanuts and is now available for the 1983 agricultural season.

Vertac is a Memphis-based firm producing agricultural and industrial chemicals at plants located in Vicksburg, MS; Jacksonville, AR; and West Helena, AR. Vertac is also the only U.S. producer of nitrogen tetroxide, a fuel oxidizer used in the Space Shuttle and for other rocket systems.

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AB0000064604



RHÔNE-POULENC INC.

P O Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

January 19, 1987

Mr. C. Parker
Cedar Chemical Corporation
Highway 242 South
W. Helena, AR 72390

Dear Charlie:

Enclosed are the Receiving Report sets for the raw materials required for the production of RP 10.

Also enclosed is a supply of Blanket Purchase Order Release forms.

It is NOT necessary for you to send to my attention the weekly reports. I only wish to receive the monthly report recapping that month's production.

Please let me know if I can be of further assistance.

Yours truly,

RHONE-POULENC INC.



E. Schroder
Purchasing Agent

ES/lp
Enclosures



ADEQ0017559

CEDAR CHEMICAL CORPORATION

24th Floor • 5100 Poplar Avenue • Memphis, TN 38137 • 901-685-5348

REPLY TO: P. O. BOX 2749
WEST HELENA, AR 72390
(501) 572-3701

1/15/87

Jean-Pierre DalPont
Rhone-Poulenc Inc.
P.O. Box 125
Monmouth Junction, N.J. 08852

Re: Spent Acid - RP-10

Dear Jean-Pierre,

Per discussions with Hank Teschendorff & Michel Royer, Cedar will handle the spent acid from RP-10 as per the waste handling provisions in our agreement. I have signed the test burn agreement with Stauffer and returned it to them. The costs/credits received by Cedar from Stauffer and the transportation costs for the spent acid will be invoiced to Rhone-Poulenc.

Regards,



John Miles

cc: Geoff Pratt

ADEQ0017559

OFFICE MEMORANDUM

CC: Ray Hall
Charles Parker
Neil Robbins
Geoff Pratt

DIVISION AGROCHEMICALS

To: Distribution


Date: December 19, 1986

From: G. P. Varn

Subject: RP-15

GPV/86/699

I told John Miles (Cedar) today in answer to his question, that he should make at least 930,000 lbs. of RP-15 and schedule to exhaust new raw materials thereafter based on the most expensive material.


G. P. Varn

GPV:jmp

Distribution

J. N. Harton
E. M. Schroder
M. Royer
J-P Dal Pont
R. J. Rosenberg
P. Bertling (FRE)
J. Miles

CC: J. Miles
T. Lodice
C. Parker
N. Robbins

From: Clay Pace

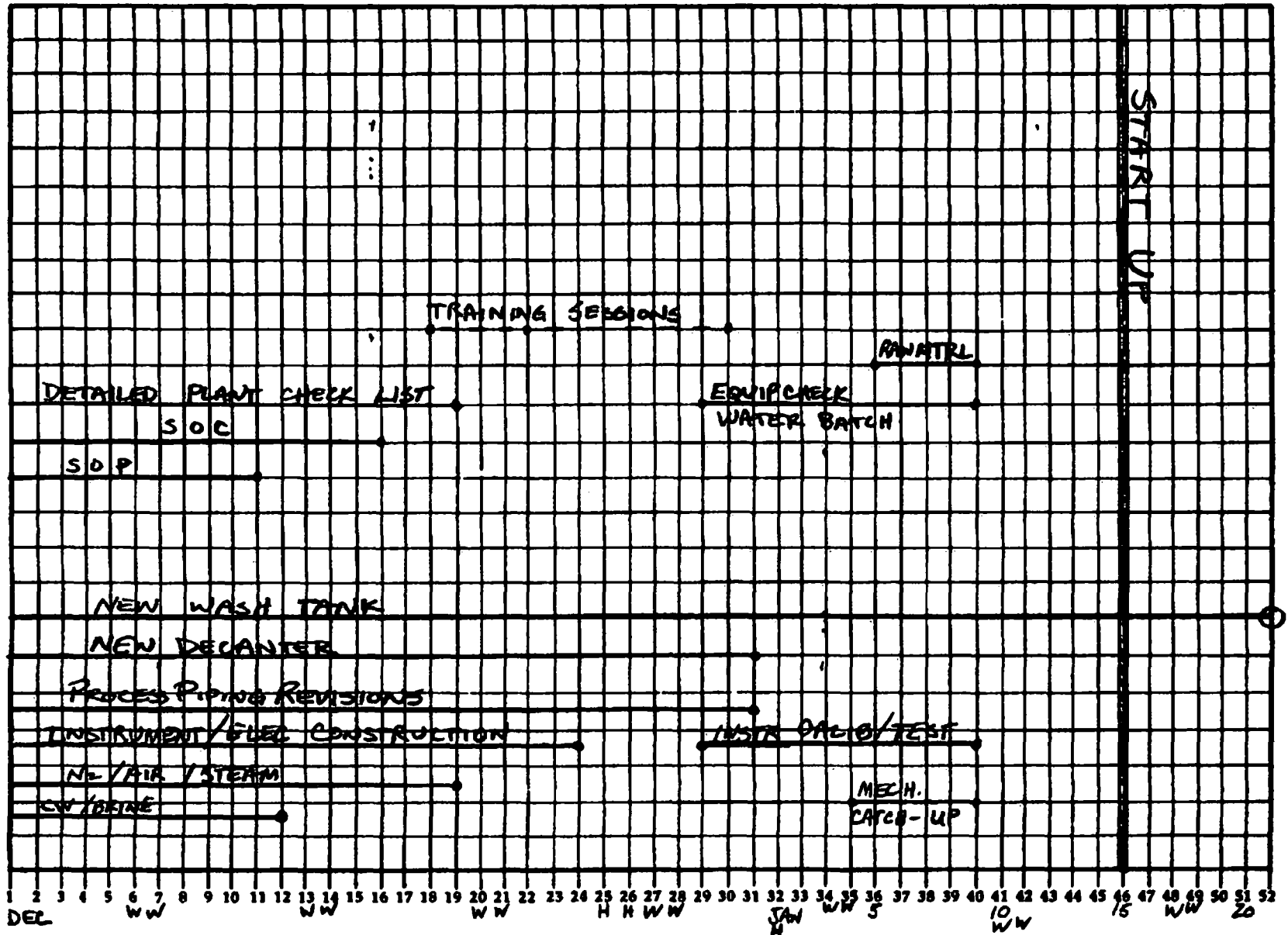
RPI - Raw Material Initial Shipments

- verified by M. Roger. 12/17/16 by C. Pace
C. Parker to coordinate shipments.

EDC	120,000 #
H ₂ SO ₄	40,000 #
HNO ₃	40,000 #
Acetic Anhydride	40,000 #
45% NaOH	40,000 #

CEDAR - WEST HELENA RP-10 COMPLETION SCHEDULE

12/8/86



RP-15 YIELD

THEORETICAL YIELD

$$\text{LBS CRESOL CHARGED} \times \frac{286.7}{108.1} = \frac{102,6522 \times \text{M-CRESOL}}{\text{LBS THEORETICAL RP-15}} \cdot (100\%)$$

98.66%
$$\text{YIELD} = \frac{\text{ACTUAL LBS (100\%)}}{\text{THEORETICAL LBS (100\%)}}$$

WASTE WATER INV. % x 20,000 gals

PLANT STATUS: PER R. JONES

	lbs/GAL
CRESOL	8.67
KOH	12.09
BTF	12.09
DMAC	7.88
RP-15	10.7

LIDACE PER lb of RP-15

CRESOL	.5
BTF	.78
KOH	.56
DMAC	.25
W/W	1.5

DCA Purchases from R-P Detail:

Date	Vendor	Inv. #	DCA		Load	ODCB Used lbs	DCA Purch lbs	Amount	Units Pr
			kg	lbs					
A/Ps R-P:									
4/27/1999	P-P	60132483	44,000	97,002				85,800.00	0.885
5/4/1999	P-P	60132668	32,000	70,547				62,400.00	0.885
A/P's Misc:									
6/30/1999	Gilscot	55268						28,118.02	
ODCB Used									
5/31/1999	ODCB Used	JV03-5-38				174,168		64,442.18	0.370
Sub Total								238,758.18	1.425
Value Transferred to Inventory:									
5/31/1999	DCA Purchased	JV03-5-55					187,549	(212,642.18)	1.289
10/31/1999	DCA Purchased	JV03-10-55						(26,118.02)	
Balances			78,000	187,550		174,168	187,549	0.00	

DCA Purchases from Biesterfield Detail:

Date	Vendor	Inv. #	DCA		Load	ODCB Used lbs	DCA Purch lbs	Amount	Units Pr
			kg	lbs					
A/Ps R-P:									
7/3/1999	Biesterfield	2533AG221	12,000	26,455				38,600.00	1.383
A/P's Misc:									
8/24/1999	Gilscot	55412						5,708.02	
9/30/1999	Gilscot	55412						140.00	
Sub Total								42,448.02	1.605
Value Transferred to Inventory:									
8/31/1999	DCA Purchased	JV03-8-55					28,455	(26,984.10)	1.020
10/31/1999	DCA Purchased	JV03-10-55						(15,464.82)	
Balances			12,000	26,455		0	26,455	0.00	

Identical to IVA FR 53 969 502.

STAT

: 065 01/91

MAY 27 1999

INVOICEE: USCEDAR
CEDAR CHEMICAL CORPORATION
ATTN : BOB CHRISTIAN
P.O. BOX BOX 2749
72390 WEST HELENA/AR
UNITED STATES

IN KUHNE ET NAGEL

EOC : SAJOBABONY

SH N° : 29214210

70,547 # DCA TRANS TO EM.
73,334 # ODCB USED

RHONE POULENC AGRO
3,4-DCPI
CEDAR / USA
N.W.....
G.W.....
NR.....

62.400,00 USD

1 des Impôts

RHÔNE-POULENC
SECTEUR AGRO
Rue Pierre Baizet - B.P. 9163
69263 LYON CEDEX 09
72 85 25 25 - Fax 04 72 85 2
369 503 309 - Capital 1 431 51

AB0000063048

Rhône-Poulenc Agro

14-20, rue Pierre Baizet - B P 9163
69263 Lyon Cedex 09 - France
Tel 04 72 85 25 25 - Fax 04 72 85 27 99
Telex 310 098 F Rhône
N° Identification TVA FR 53 969 503 309

ORIGINAL

MAY 27 1999

WEST HELENA

INVOICE NO: 60132483 DATE: 27.04.99
STAT : 005 01 91

CONSIGNEE: HUENY
NORTH HUNGARY: CHEMICAL
EMV
3792 SAJOHABONY
HUNGARY

INVOICEE: USCETAF
CEDAR CHEMICAL CORPORATION
ATTN: BOB CHRISTIAN
P.O. BOX BOX 2742
72390 WEST HELENA AR
UNITED STATES

REF: 01 40132483 0010
REF: 34030778
SHIPPING: BETE FRANCE
TERMS OF DELIVERY: FOB-DELIV UNCLEARED
TERMS OF PAYMENT: 30 IN 5 INVOICE DATE
PAYMENT DATE: 28.07.1999
PAYMENT MODE: TELEGRAPHIC TRANSFER
CURRENCY: USD

IN C-6921-TA

DOC: SAT. 1-5000

PRODUCT CODE: 199311RL
COST MATERIAL NO: 314 DC-
QUANTITY: 440000 KG
UNIT PRICE: 1.95 USD PER 1 KG
AMOUNT: 85,800.00 USD

SH N°: 1921401

97,002# DCA SALE TO E
100,834# OXB USED

4-20-99

PHONE: 04 72 85 25 25
314-0001

VENDOR #		INVOICE #	
24804		60132483	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
33778		1	042799
TERMS CODE	DUE DATE	FRY. BILL CD	SALES ORDER #
D	7-26-99		
INVOICE AMT		DISC ALLOWED	
85,800.00			
GL NUMBER	AMOUNT	WORK ORDER #	
24 1590	85,800.00	235	

ST. 1111111111

100,834# OXB USED

RHÔNE POULENC
SECTEUR AGRO
Rue Pierre Baizet - B P 9163
9263 LYON CEDEX 09
85 25 25 - Fax 04 72 85 27 99
1969 503 309 - Capital 1 431 515 000 F

RHÔNE-POULENC

Rhône-Poulenc Agro

14-20, rue Pierre Baizer - B P 9163
69263 Lyon Cedex 09 - France
Tel 04 72 85 25 25 - Fax 04 72 85 27 99
Telex 310 098 F Rhone
N° identification TVA FR 53 969 503 309

MAY 27 1999

DEBIT NOTE

NO: 60125470 DATED: 30.07.1998

INVOICE : USCEDAR
CEDAR CHEMICAL CORPORATION
ATTN : BOB CHRISTIAN
P.O. BOX BOX 2749
72390 WEST HELENA/AR
UNITED STATES

USCEDAR
CEDAR CHEMICAL CORPORATION
ATTN : BOB CHRISTIAN
P.O. BOX BOX 2749
72390 WEST HELENA/AR
UNITED STATES

Y/REF : A SUIVRE
TERMS OF PAYMENT : 90 DAYS INVOICE DATE
PAYMENT DATE : 28.10.1998
PAYMENT MODE : TELEGRAPHIC TRANSFER
CURRENCY : USD

0010 19931VVRC 34 DCA OUVRAISON CEDAR VRAC
O/REF : 01/60122288/0010/0000
PRODUCT.....: 34 DCA OUVRAISON CEDAR VRAC
NET VALUE 1 : 2.176.24 USD

O/ORD: 01/40132320/0010/0000

2.176.24 USD

ITEM TOTAL

2.176.24 USD

TOTAL TO BE PAID

VENDOR #		INVOICE #	
24804		60125470	
PO #	REC. RPT. #	INV. CD	INV. DATE
		1	073098
TERMS CODE	DUE DATE	FRY BILL CD	SALES ORDER #
D	10-28-98		
INVOICE AMT		DISC ALLOWED	
2176.24			
GL NUMBER	AMOUNT		WORK ORDER #
01535910	2176.24		235
DONE BY		DATE	APPROVED BY
RK		3-26-99	[Signature]
		ENTERED BY	

EK : 850 FRF
WEEK : 10.200 FRF
LE HAVRE : 12.500 FRF

TOLL CONVERSION RATE :

AB0000063048

Rhône-Poulenc Agro

14-20, rue Pierre Baizet - B P 9163
69263 Lyon Cedex 09 - France
Tel 04 72 85 25 25 - Fax 04 72 85 27 99
Telex 310 098 F Rhône
N° identification TVA FR 53 969 503 309

MAY 2 - 1999

DEBIT NOTE

NO: 60125389 DATED 29.07.1998

INVOICE : USCEDAR
CEDAR CHEMICAL CORPORATION
ATTN : BOB CHRISTIAN
P.O. BOX BOX 2749
72390 WEST HELENA/AR
UNITED STATES

USCEDAR
CEDAR CHEMICAL CORPORATION
ATTN : BOB CHRISTIAN
P.O. BOX BOX 2749
72390 WEST HELENA/AR
UNITED STATES

Y/REF : A SUIVRE
TERMS OF PAYMENT : 90 DAYS INVOICE DATE
PAYMENT DATE : 27.10.1998
PAYMENT MODE : TELEGRAPHIC TRANSFER
CURRENCY : USD

0010 19931VVRG 34 DCA OUVRAISON CEDAR VRAC
O/REF : 01/60122288/0010/0000
PRODUCT.....: 34 DCA OUVRAISON CEDAR VRAC
NET VALUE 1 : 2.854.20 USD

O/ORD: 01/40132320/0010/0000

ITEM TOTAL

2.854.20 USD

2.854.20 USD

VENDOR #		INVOICE #	
24804		60125389	
P.O. #	REC. RPT. #	INV CD	INV DATE
		1	072998
TERMS CODE	DUE DATE	FRY BILL CD	SALES ORDER #
D	10-27-98		
INVOICE AMT.		DISC ALLOWED	
2834.20			
GL NUMBER	AMOUNT	WORK ORDER #	
C153 5910	2834.20	235	
DATE		APPROVED BY	
5-26-99		[Signature]	
ENTERED BY			
RK			

JUNE 98 : 9800 FRF
DAY AND CT
DAY AND CT

14-20, rue Pierre Belzet - A.P. 9183
69263 Lyon Cedex 03 - France
Tél 04 72 85 25 25 - Fax 04 72 85 27 99
Télex 310 098 F Rhône
N° identification TVA : FR 53 969 303 309

MAY 27 1999

WASH. FIELD

7 NOTE
NO: 60124126 DATED: 11.02.1996

USCEDAR
CEDAR CHEMICAL CORPORATION
ATTN : 808 CHRISTIAN
P.O. BOX 308 7749
72030 WEST MELENAR
UNITED STATES

UNITED STATES	:	A SUIVRE
Y/REF	:	90 DAYS INVOICE DATE
TERMS OF PAYMENT	:	09.03.1998
PAYMENT DATE	:	TELEGRAPHIC TRANSFER
PAYMENT MODE	:	USD
CURRENCY	:	

0010" 19931VVRD 34 DCA OLIVRAISON CEDAR VRAO
O/REF : 01/60122288/0010/0000
PRODUCT..... : 34 DCA OLIVRAISON CEDAR VRAO
NET VALUE 1 : 128.845,90 USD

0/ORD: 01/40132320/001C/0000

128,345,90 USC

ITER TOTAL

123.345,40 USD

TOTAL TO BE PAID.

FOR THE TRANSPORT AND CONTAINERS RENTAL

[illegible]

1. NAME: [illegible]
 2. ADDRESS: [illegible]
 3. CITY: [illegible]
 4. STATE: [illegible]
 5. ZIP: [illegible]

AB000006

JUN-01-99 10:30AM FROM: LEVAR LREMICAL
Rhône-Poulenc Agro
 14-20, rue Pierre Boizet - B.P. 9163
 69263 Lyon Cedex 08 - France
 Tél. 04 72 85 25 25 - Fax 04 72 85 27 89
 Télex 310 098 F Rhône
 N° identification TVA : FR 53 969 503 309

78010643388

1-389 P 10/13 P 12

ENTFER

MAY 27 1999

WEST HELENA

DEBIT NOTE

INVOICE : L00000
 CEDAR CHEMICAL CORPORATION
 ATTN : 808 CHRISTIAN
 P.O. BOX 274
 72390 WEST HELENA/AR
 UNITED STATES

USLEVAR
 CEDAR CHEMICAL CORPORATION
 ATTN : 808 CHRISTIAN
 P.O. BOX 274
 72390 WEST HELENA/AR
 UNITED STATES

Y/REF : A SUIVRE
 TERMS OF PAYMENT : 30 DAYS INVOICE DATE
 PAYMENT DATE : 09.03.1999
 PAYMENT MODE : TELEGRAPHIC TRANSFER
 CURRENCY : USD

0010 : 19931VVV0 04 DCA OUVRAISON CEDAR VRAO
 O/REF : 01/60121289/0010/0000
 PRODUCT..... : 04 DCA OUVRAISON CEDAR VRAO
 NET VALUE 1 : 45.475,40 USD
 O/ORD: 01/40132320/0010/0000
 45.475,40 USD
 ITEM TOTAL

TOTAL TO BE PAID

45.475,40 USD

VENDOR #		INVOICE #	
24804		60121125	
PRO #	REC RPT #	INV CD	INV. DATE
		1	06/11/98
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
D	9.9.98		
INVOICE AMT		DISC ALLOWED	
45,475.40			
GL NUMBER	AMOUNT		WORK ORDER #
01535910	45,475.40		235



Inv./Ref. No. 2533/AG-2213

Date: JULY 3, 1999

Ship From: JARWARHAL NEHRU
PORT

Basis: CIF NEW ORLEANS, LA

Freight: PREPAID

Payment Terms: NET 30 DAYS B/L
DATE

CEDAR CHEMICAL CORP.
5100 POPLAR
MEMPHIS TN 38137

AUG 3 0 1999

WASH DC

A LATE PAYMENT CHARGE OF 1% COMPOUNDED MONTHLY WILL BE APPLIED TO ANY AMOUNTS OUTSTANDING AFTER DUE DATE.

PRODUCT	QUANTITY	PRICE	AMOUNT
3,4 DICHLOROANILINE PURITY 98.5 %	12,000 KGS	US\$3.05/KG (CIF)	US\$36,600.00

ORIGIN: INDIA

PACKING:

240 X 50 KG NET DRUMS
TOTAL NET WT = 12,000 KGS
TOTAL GROSS WT = 13,560 KGS

FOB VALUE	US\$34,430.91
FREIGHT	2,000.00
INSURANCE	169.09

\$36,600.00

[illegible]

RECT

2

INC.

AB0000063048

CUSTOM MFG	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Containers	Gal/Lbs	Total
Ethephon-Days															
Prod 100% AI															1 196
Ethylene Oxide															1 242
Phosphorus Trichloride															0 850
Anhydrous Hydr Chloride															
Sulfuric Acid															1 189
50% Caustic															
FMC 5-Nitro-Days	31	28	31	30	10								130		
Prod 100% AI	21,781	18,705	28,822	34,017	2,916								108,241		
Step 3	127,863	69,421	166,148	168,104									551,536	5 1914	5 920
Step 4															1 033
Step 5															1 000
Calcium Chloride															
Chlorine	13,717	8,260	11,910	12,091									45,878	0 4328	0 170
Aluminum Sulfate	34,347	25,049	38,178	50,470	1,870								147,914	1 3922	1,530
G Acid	14,559	5,852	5,642	15,314									41,367	0 3894	0,900
50% Caustic	7,668	8,280	27,272	25,000	9,295								78,515	0 7380	1 920
20% Oleum	108,439	81,999	40,309	148,504	12,978								392,228	3 6918	5 160
Methanol	21,458	23,340	12,741	32,502	8,348								98,387	0 8261	4 880
Soda Ash	4,900	3,700	3,650	6,000	1,000								19,250	0 1812	0 180
Toluene	110,448	114,324	90,155	158,049	12,167								465,143	4 3782	4 570
83% Sulfuric Acid				61,200									61,200	0 5760	0 010
Mixed Acid	7,581	5,774	6,455	11,820	1,281								32,891	0 3098	0 410
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Containers	Gal/Lbs	
Stanol-Days									14	31			45		
Prod Kg									3,547	11,724			15,271		
Sterol									24,217	52,243			78,460	0 7197	
N-Propanol									63,691	143,150			206,841	1 9469	
Catalyst									164	874			1,028	0 0097	
Hydrogen										274			274	0.0026	

Process: Methylthiopinacolone Oxime (MTPO)

Basis: MTPO is manufactured under contract for export.

Raw Materials

Monochloropinacolone (MCP)
Sodium Hydroxide
Methyl Mercaptan
Hydroxylamine Sulfate
Methyl Alcohol
Sodium Hypochlorite

Process Description

Monochloropinacolone (MCP) is reacted with the sodium salt of methyl mercaptan to form methylthiopinacolone (MTP). MTP is further reacted to form Methylthiopinacolone Oxime.

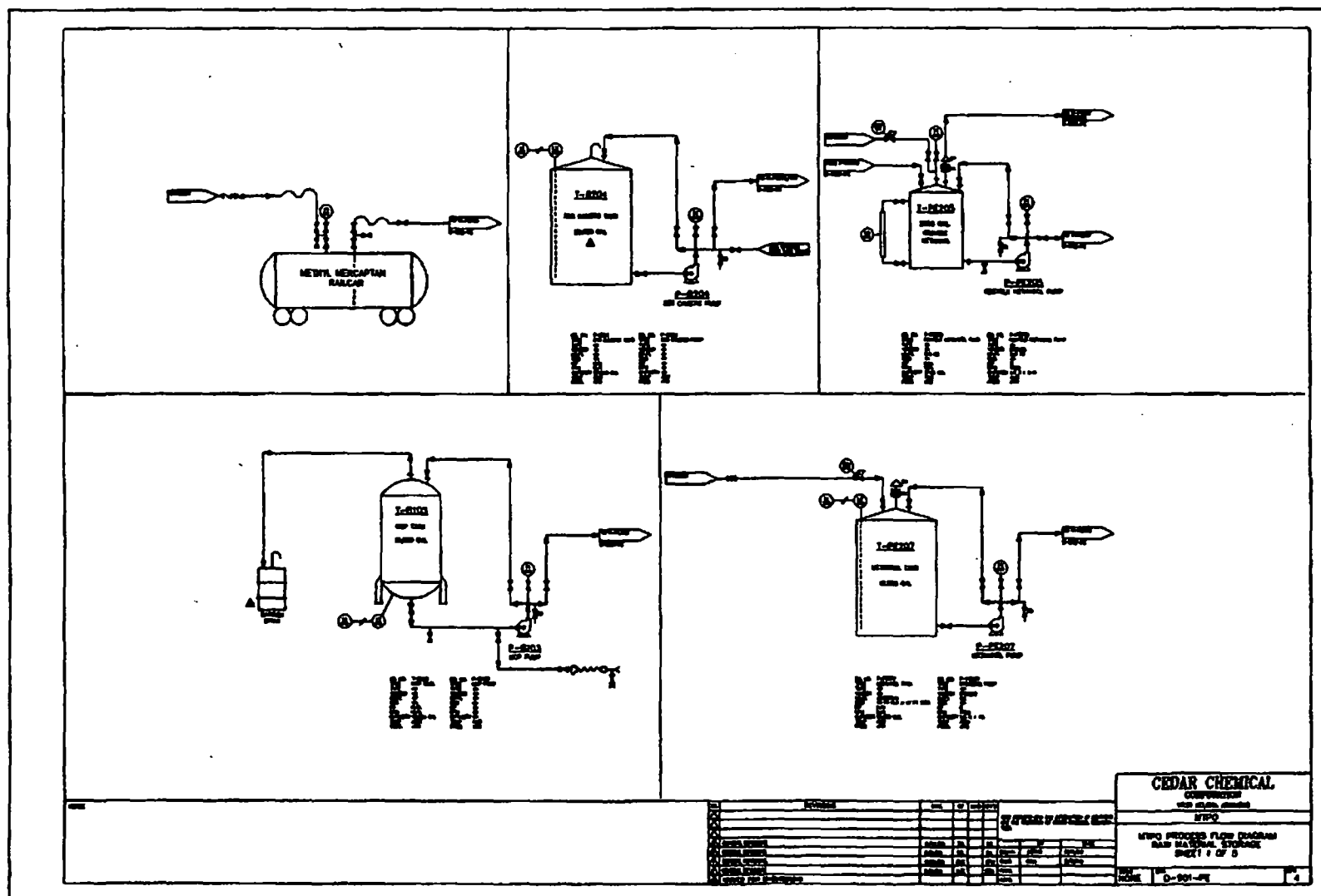
Manufacturing Schedule

Production is at the request of the client company and availability of equipment. The product is usually produced for about two months per year and can be manufactured in either Unit 3 or Unit 4.

Process Considerations

Wastewater generated is treated within the confines of the process and then passed to the NPDES permitted, biological treatment system. The wastewater consists of aqueous, process waste and scrubber liquor.

Air emissions consists of methyl mercaptan which is vented at the end of the first reaction step. This sulfur compound is destroyed in a packed tower scrubbing system utilizing sodium hypochlorite. Fugitive emissions consist of methyl mercaptan and methyl alcohol.



CEDAR CHEMICAL

COMPONENT

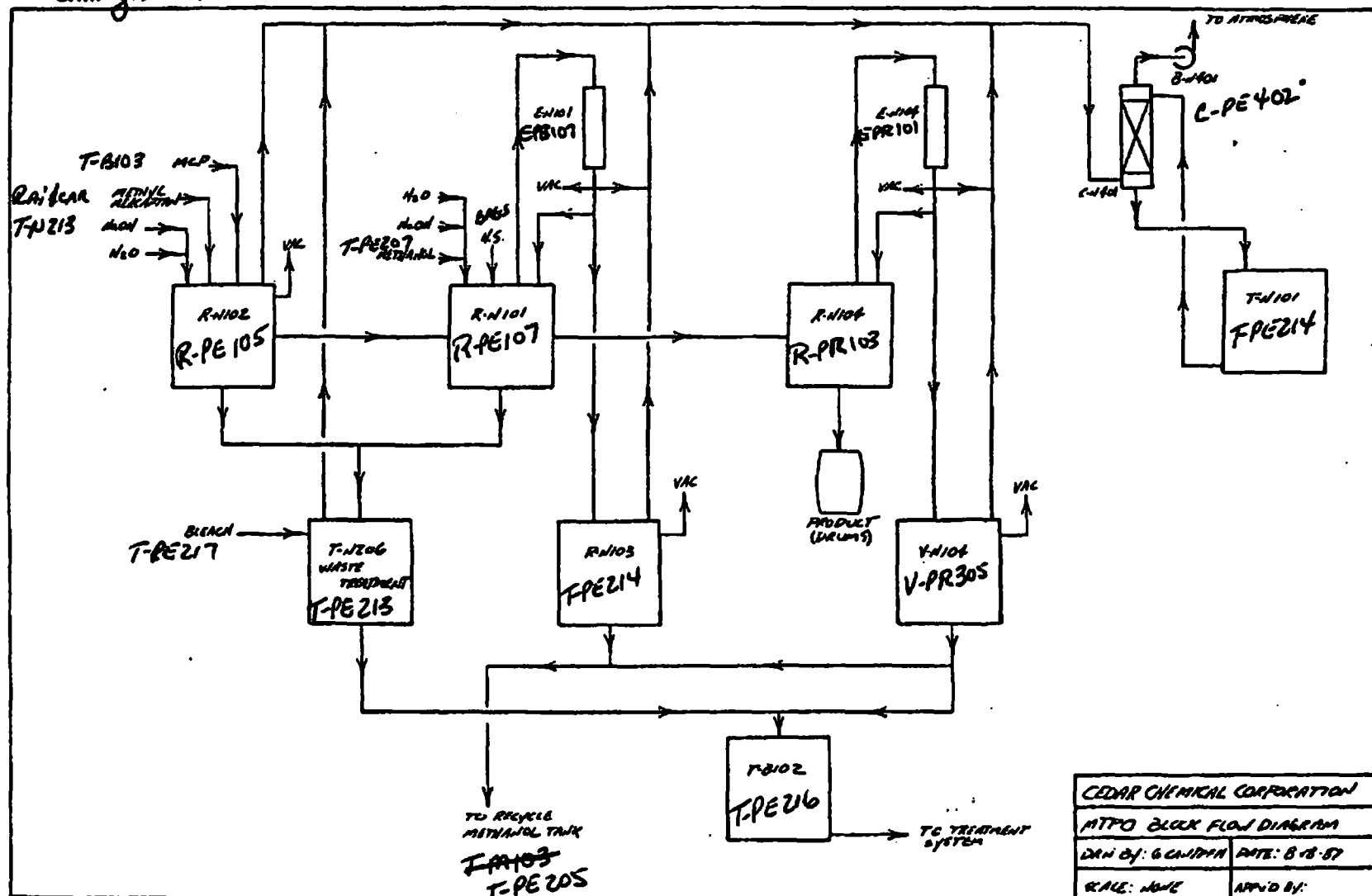
FOR PLANT DESIGN

STPD

STPD PROCESS FLOW DIAGRAM
RAW MATERIALS, STORAGE
SHEET 1 OF 5

DATE 10-20-64

MTPO
- Changes for Unit 1 versus Unit 4



MTPO 3 months 1986
3 months 1987

Δ JE Porter 8/5/90

Unit ³ or Unit 4 : MeOH

Methyl Alcohol for MRPD Process

$$FW = 32.05$$

$$VP = 100 \text{ mm @ } 21.2^\circ \text{C}$$

$$\text{Tank diameter} = 10' \quad V = ~~2334~~ 1334 \text{ ft}^3 \approx 10,000 \text{ gallons}$$

$$\text{Height} = 17' \text{ fixed Roof} \quad \text{Avg vapor space} = 8.5'$$

$$AT = 23^\circ \text{F}$$

$$C = 0.6 \text{ ~ for } 10' \text{ diameter tank}$$

$$\begin{aligned} \text{Breathing Loss} &= (2.21 \times 10^{-4}) \left(\frac{100}{760-100} \right)^{0.68} (10)^{1.73} (23)^{0.25} (0.6) (32.05) (8.5)^{0.51} \\ &= 0.90 \text{ lb/day} \end{aligned}$$

Working Loss:

At equilibrium with nitrogen pad

$$\frac{100}{760-100} = 0.15 \text{ mole MeOH / mole } N_2$$

$$\frac{(0.15)(32.05)}{28.02} = 0.17 \text{ lbs MeOH / lb } N_2$$

one tank volume per campaign - one campaign per year

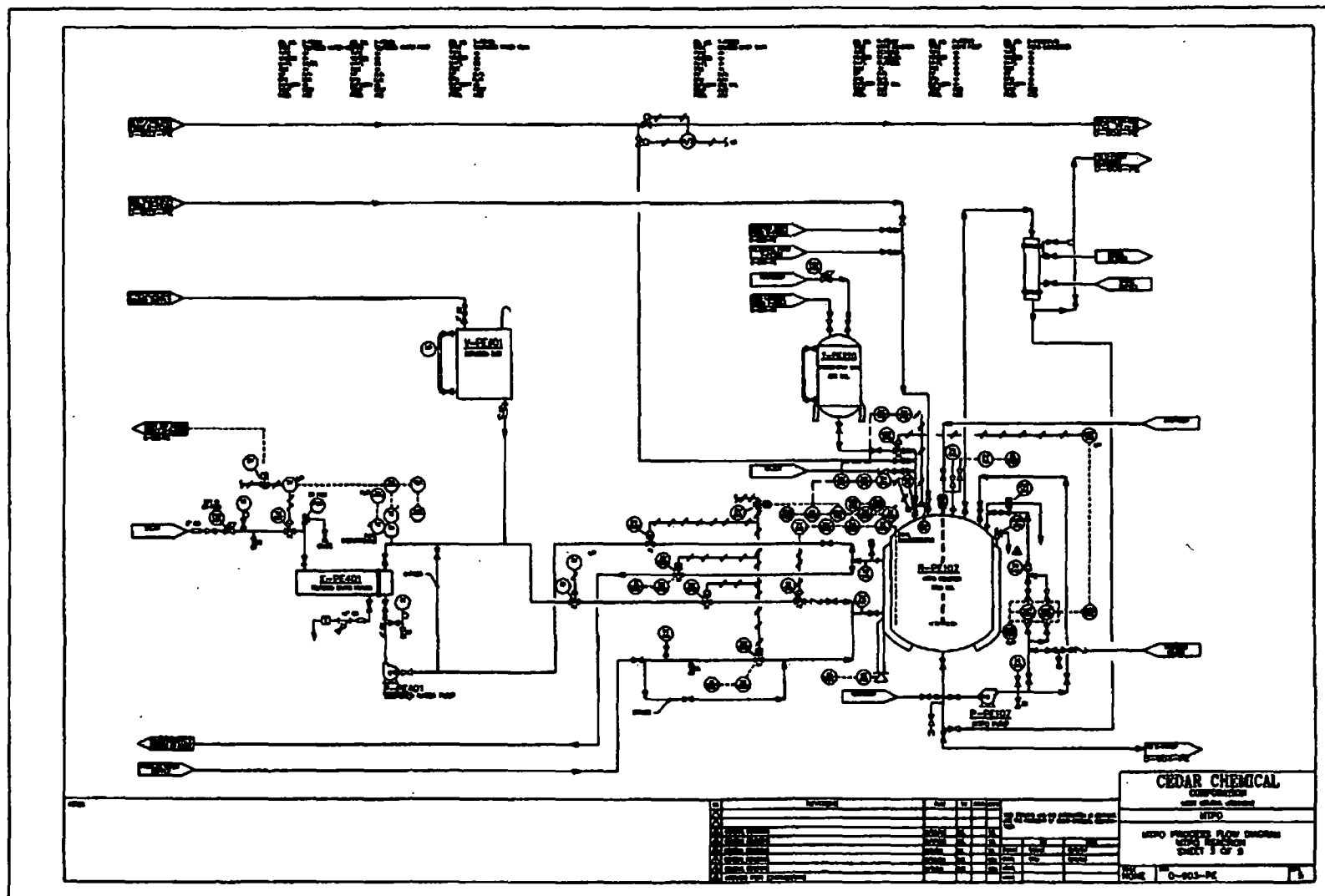
$$(1334 \text{ ft}^3)(0.0787 \text{ lb } N_2/\text{ft}^3) = 106 \text{ lb } N_2$$

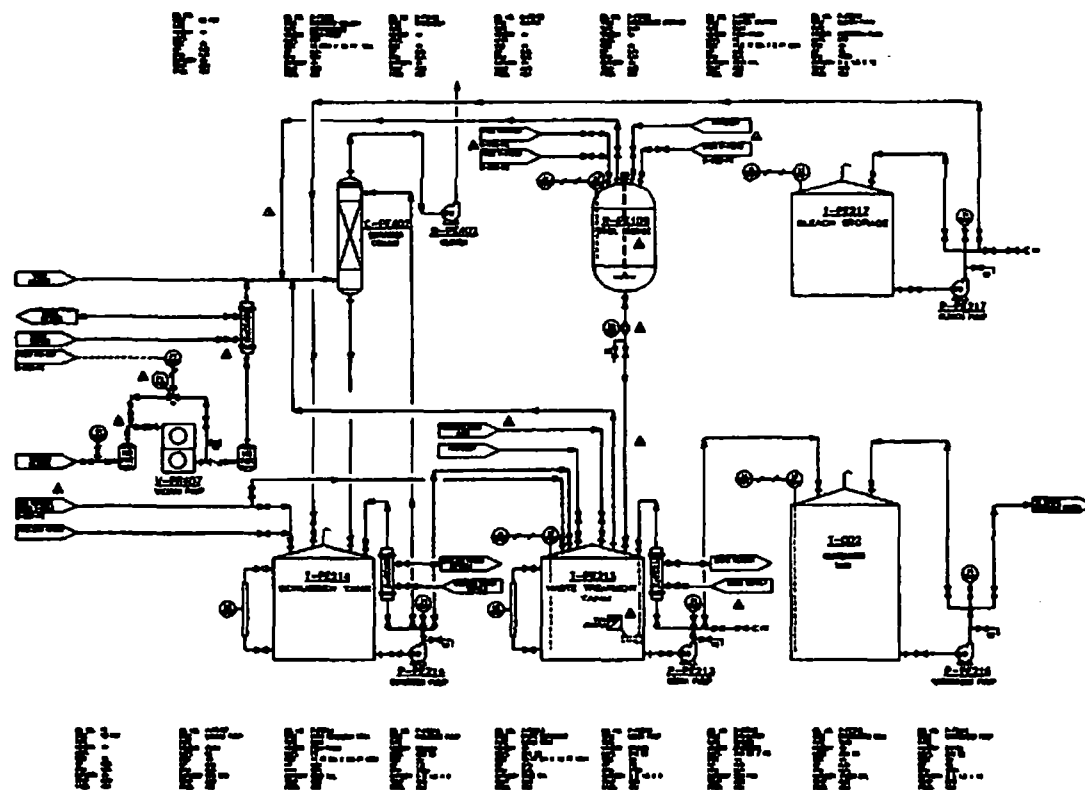
$$(106)(0.17) = 18 \text{ lbs MeOH}$$

$$\text{Annual Loss} = 18 \text{ lbs} = \text{Campaign Loss}$$

$$\text{Daily Loss} = 0.3 \text{ lbs} \quad \text{Annual over 60 days}$$

$$\text{Monthly Loss} = 9 \text{ lbs} \quad 60 \text{ day campaign}$$





NO.	DESCRIPTION	UNIT	QTY	REMARKS
1
2
3
4
5
6
7
8
9
10

CEDAR CHEMICAL	
COMPOSITION	
UNIT: GROSS WEIGHT	
NTPD	
NTPD PROCESS FLOW DIAGRAM	
UNIT: GROSS WEIGHT	
SHEET 5 OF 5	
DATE	1-20-54



VERTAC CHEMICAL CORPORATION

24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

REPLY TO: P. O. BOX 2648
WEST HELENA, AR 72390
(501) 572-3701

November 4, 1985

Mr. John Ward
Arkansas Department of Pollution Control and Ecology
8001 National Drive--P.O. Box 9583
Little Rock, AR 72209

Dear Sir:

1. From late 1976 through 1978 we produced a carbamate insecticide for Diamond-Shamrock. This was a very successful campaign for Vertac Chemical but was not continued due to US Registrations. Rhone-Poulenc currently owns the process and has contracted with Vertac Chemical to manufacture an intermediate product, stopping short of the final carbamation step.
2. Our production will begin approximately December 15, 1985 and will continue for about 30 days. Our schedule calls for 55 metric tons of MTPO to be shipped as an intermediate for manufacturing use only. Production is estimated to be complete within 30 days.
3. The process begins with monochloropinacolone (MCP) being reacted with methyl mercaptide to form methylthiopinacolone (MTP). The first reaction's product, MTP, is then reacted with hydroxylamine sulfate to form methylthiopinacolone oxime (MTPO).
4. Environmental considerations include the following areas:

Water--Two aqueous reaction phases and a scrubber liquor will be generated. One of the phases will be treated with hypochlorite to remove remaining mercaptide. All of the liquid waste will then be treated in our biological treatment system. Our past experience has demonstrated this to be acceptable and will not affect our current NPDES parameters.

Air--The first process step involves the use of methyl mercaptan in a pressurized reaction. When complete a small excess of reactant is vented to a hypochlorite scrubber. Past operating experience has demonstrated this step to be quantitative. The result being that no air contaminants are emitted.

The remaining process step has no air emissions. Vacuum systems and storage tanks will be vented to the scrubber system and/or carbon-containing drums. These will be used at final atmospheric vent points to trap fugitive odors/emissions.

Mr. John Ward
November 4, 1985
Page two

Hazardous Waste--The MTPO process does not generate any wastes which are specifically listed as hazardous. The aqueous phase of the first process step could be indentified as reactive due to its mercaptan content. However, the waste will be treated in-process with hypochlorite such that mercaptan is converted to non-hazardous sulfate. The aqueous phase will then be biologically treated.

The final process step generates a 60 to 70 percent methyl alcohol waste which will be distilled and recycled back to the process. The aqueous phase and any residual alcohol will be sent to our biological treatment system.

Scrubber liquor, a non-hazardous material, will be mixed with other aqueous wastes and sent to the biological treatment system also. There are no other wastes generated which could considered to be hazardous by characteristic.

Process equipment, storage tanks, and environmental control equipment will be the same as that used in the 1976 production. Since this process equipment has been previously permitted and no increases in emissions are currently foreseen, we do not anticipate formal modification to our operating permits. If the department has any questions, please call us.

Sincerely,

A handwritten signature in dark ink, appearing to read "Joe E. Porter", written over a horizontal line.

Joe E. Porter
Environmental Engineer

CC: J.W. Shackelford
J.H. Miles

JEP:rf

Process: Methylthiopinacolone Oxime (MTPO)

Basis: MTPO is manufactured under contract for export.

Raw Materials

Monochloropinacolone (MCP)
Sodium Hydroxide
Methyl Mercaptan
Hydroxylamine Sulfate
Methyl Alcohol
Sodium Hypochlorite

Process Description

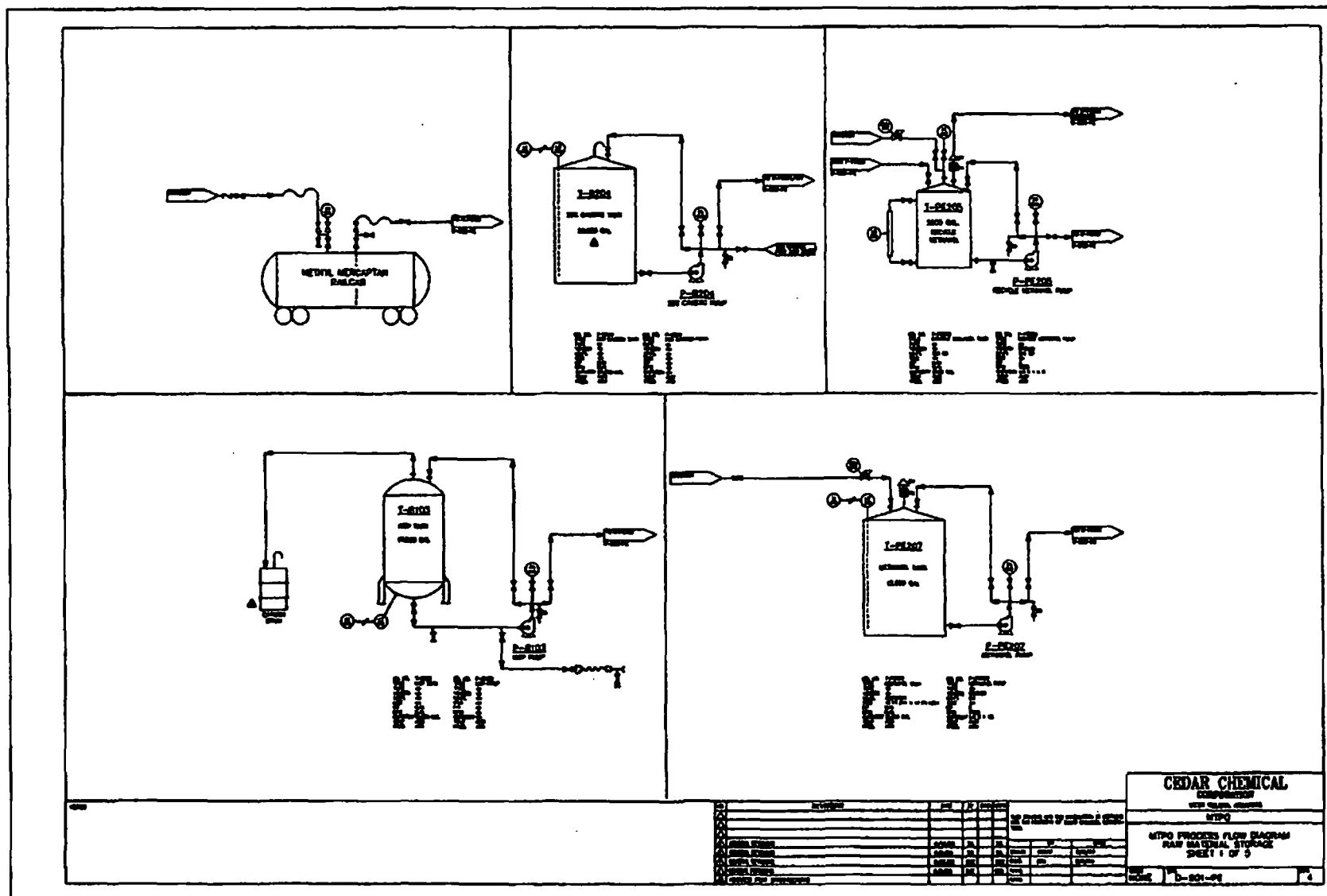
Monochloropinacolone (MCP) is reacted with the sodium salt of methyl mercaptan to form methylthiopinacolone (MTP). MTP is further reacted to form Methylthiopinacolone Oxime.

Manufacturing Schedule

Production is at the request of the client company and availability of equipment. The product is usually produced for about two months per year and can be manufactured in either Unit 3 or Unit 4.

Process Considerations

Wastewater generated is treated within the confines of the process and then passed to the NPDES permitted, biological treatment system. The wastewater consists of aqueous, process waste and scrubber liquor. Air emissions consists of methyl mercaptan which is vented at the end of the first reaction step. This sulfur compound is destroyed in a packed tower scrubbing system utilizing sodium hypochlorite. Fugitive emissions consist of methyl mercaptan and methyl alcohol.



CEDAR CHEMICAL
 CORPORATION
 10000 100th Avenue
 MTPO
 MTPO PROCESS FLOW DIAGRAM
 PART 1 OF 3
 SHEET 1 OF 3
 DATE 10-20-94

Unit ³ or Unit 4 : MeOH

Methyl Alcohol for MPO Process

$$FW = 32.05$$

$$VP = 100 \text{ mm @ } 21.22$$

$$\text{Tank diameter} = 10' \quad V = ~~2000~~ 1334 \text{ ft}^3 \approx 10,000 \text{ gallons}$$

$$\text{Height} = 17' \text{ fixed Roof} \quad \text{Avg Vapor space} = 8.5'$$

$$AT = 23^\circ\text{F}$$

$$C = 0.6 \text{ ~ for } 10' \text{ diameter tank}$$

$$\begin{aligned} \text{Breathing Loss} &= (2.21 \times 10^{-4}) \left(\frac{100}{760-100} \right)^{0.68} (10)^{1.73} (23)^{0.5} (0.6) (32.05) (8.5)^{0.51} \\ &= 0.90 \text{ lb/day} \end{aligned}$$

Working Loss:

At equilibrium with nitrogen pad

$$\frac{100}{760-100} = 0.15 \text{ mole MeOH / mole } N_2$$

$$\frac{(0.15)(32.05)}{28.02} = 0.17 \text{ lbs MeOH / lb } N_2$$

one tank volume per campaign - one campaign per year

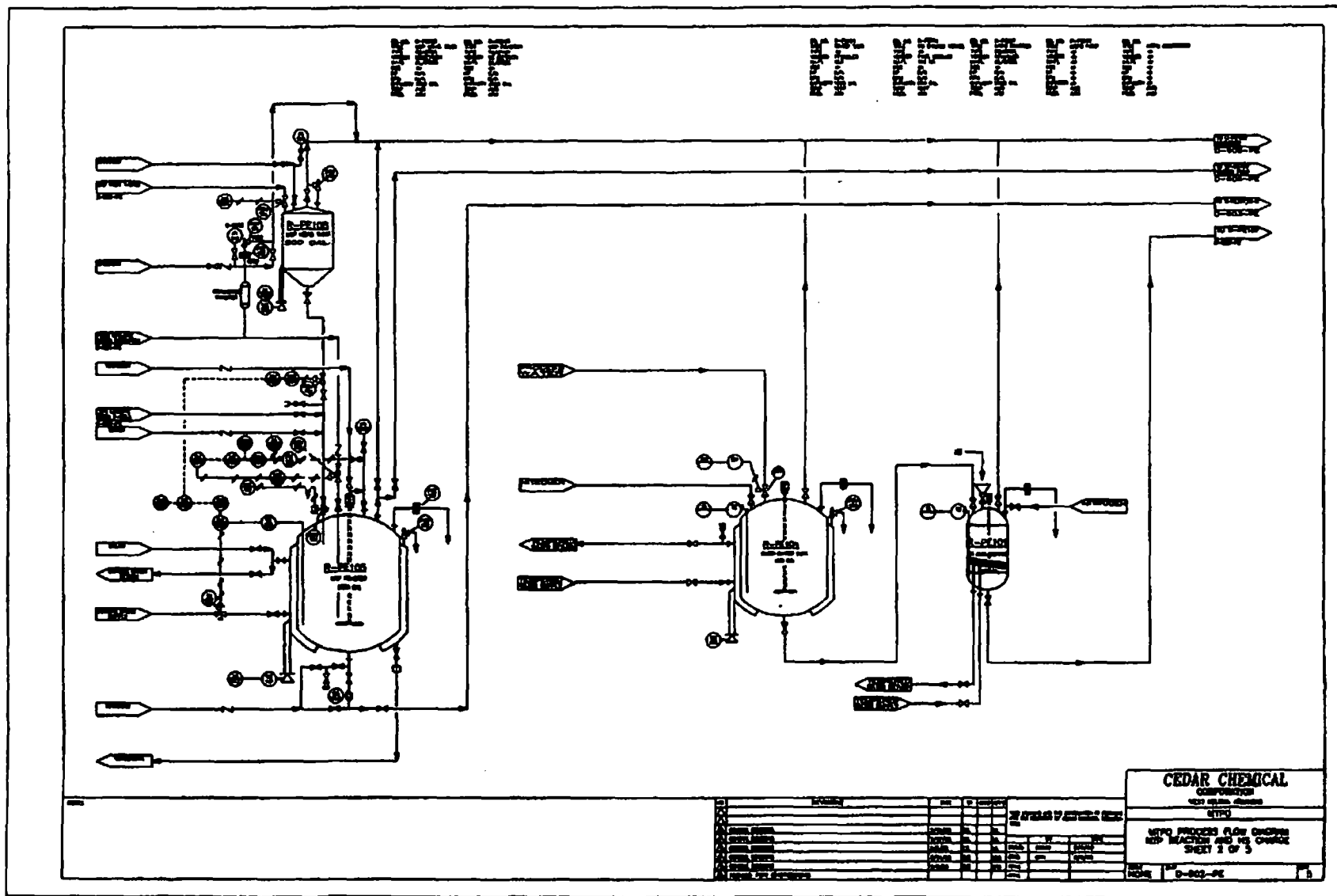
$$(1334 \text{ ft}^3) (0.0787 \text{ lb } N_2 / \text{ft}^3) = 106 \text{ lb } N_2$$

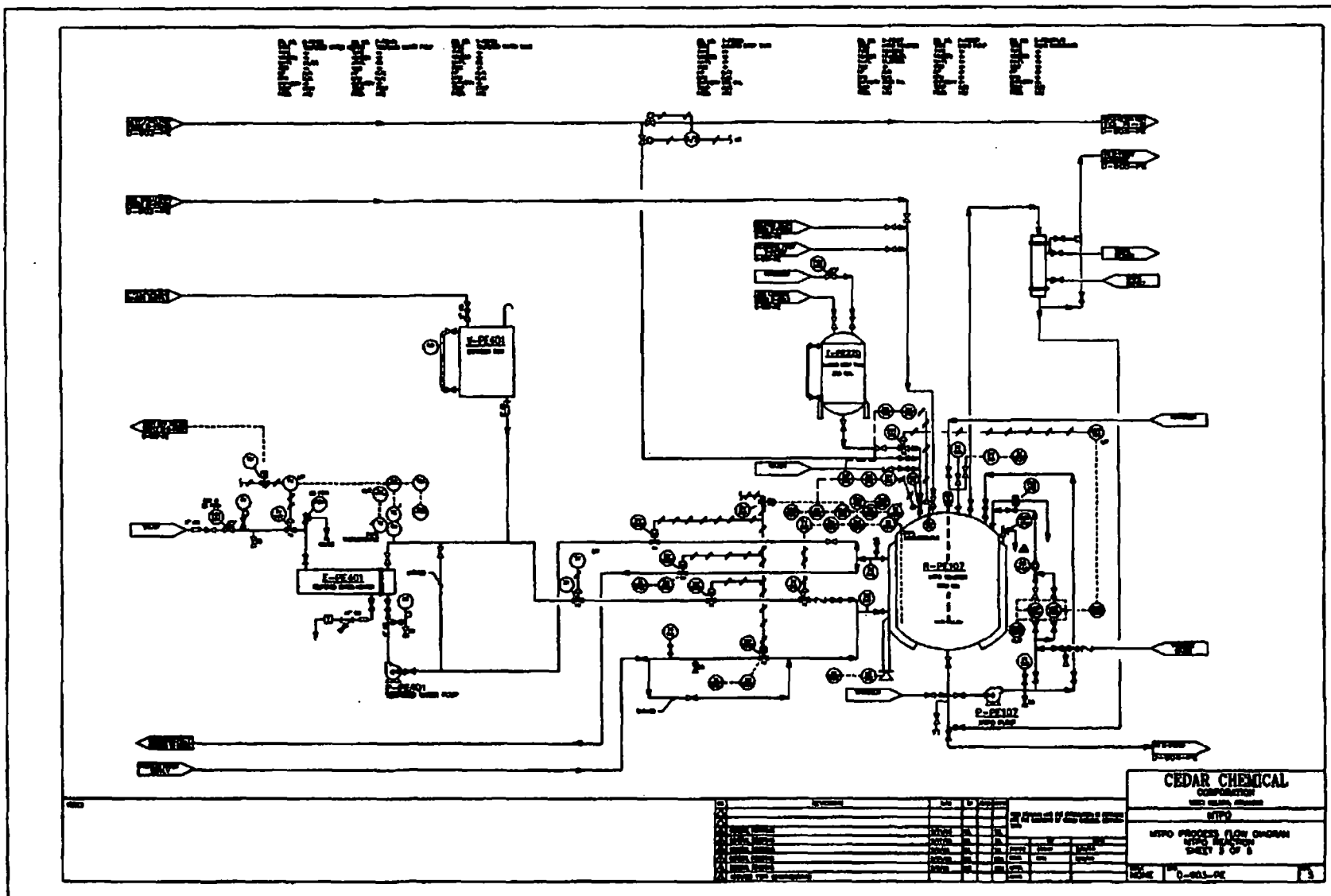
$$(106) (0.17) = 18 \text{ lbs MeOH}$$

$$\text{Annual Loss} = 18 \text{ lbs} = \text{Campaign loss}$$

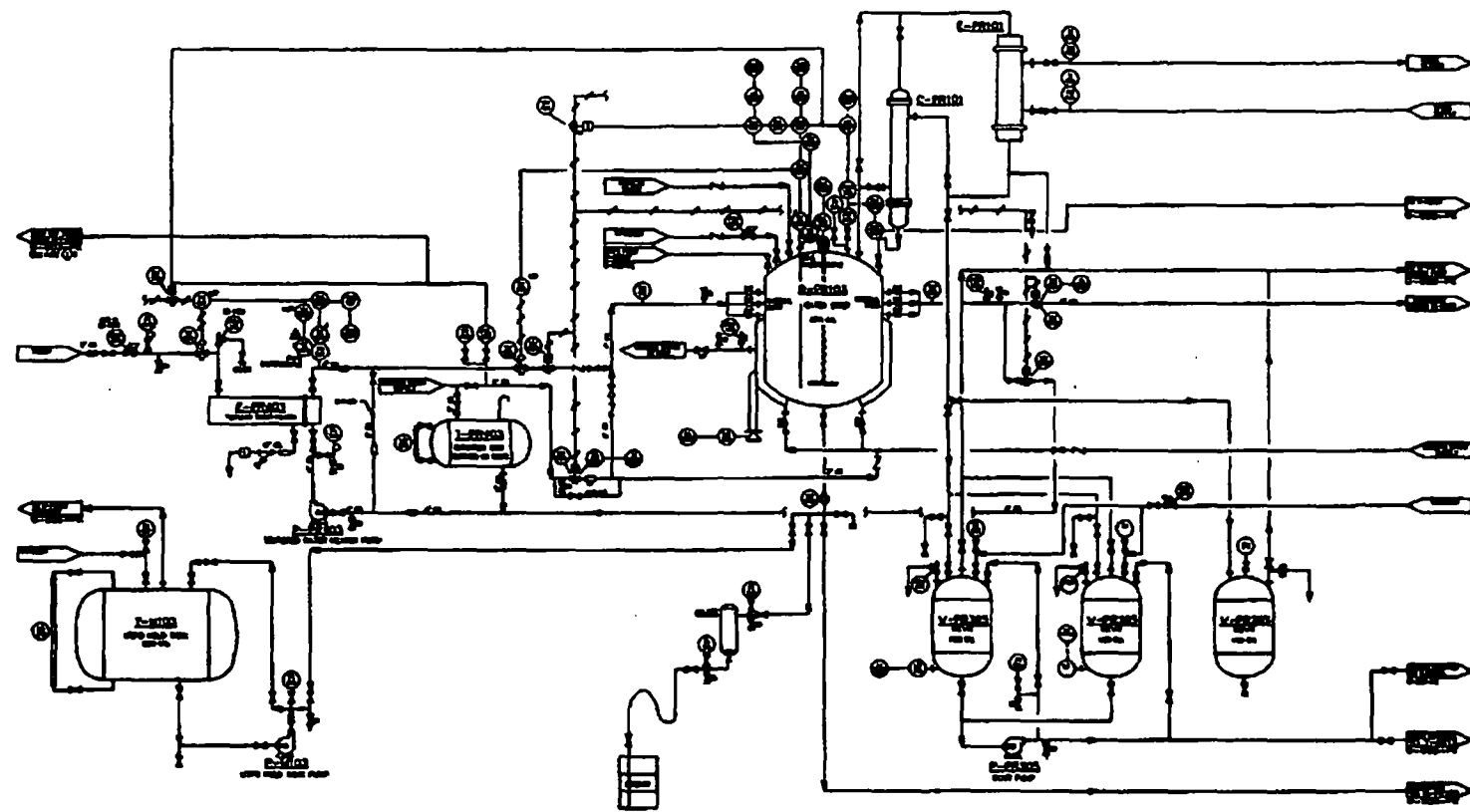
$$\text{Daily Loss} = 0.3 \text{ lbs} \quad \text{Annual over 60 days}$$

$$\text{Monthly Loss} = 9 \text{ lbs} \quad 60 \text{ day campaign}$$





UNIT PROCESS FLOW DIAGRAM



CEDAR CHEMICAL CORPORATION
 NEW BRITAIN, CONNECTICUT
 07001
 UNIT PROCESS FLOW DIAGRAM
 SHEET 4 OF 5
 10-204-10



VERTAC CHEMICAL CORPORATION

24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

REPLY TO: P. O. BOX 2648
WEST HELENA, AR 72390
(501) 572-3701

November 4, 1985

Mr. John Ward
Arkansas Department of Pollution Control and Ecology
8001 National Drive--P.O. Box 9583
Little Rock, AR 72209

Dear Sir:

1. From late 1976 through 1978 we produced a carbamate insecticide for Diamond-Shamrock. This was a very successful campaign for Vertac Chemical but was not continued due to US Registrations. Rhone-Poulenc currently owns the process and has contracted with Vertac Chemical to manufacture an intermediate product, stopping short of the final carbamation step.
2. Our production will begin approximately December 15, 1985 and will continue for about 30 days. Our schedule calls for 55 metric tons of MTPO to be shipped as an intermediate for manufacturing use only. Production is estimated to be complete within 30 days.
3. The process begins with monochloropinacolone (MCP) being reacted with methyl mercaptide to form methylthiopinacolone (MTP). The first reaction's product, MTP, is then reacted with hydroxylamine sulfate to form methylthiopinacolone oxime (MTPO).
4. Environmental considerations include the following areas:

Water--Two aqueous reaction phases and a scrubber liquor will be generated. One of the phases will be treated with hypochlorite to remove remaining mercaptide. All of the liquid waste will then be treated in our biological treatment system. Our past experience has demonstrated this to be acceptable and will not affect our current NPDES parameters.

Air--The first process step involves the use of methyl mercaptan in a pressurized reaction. When complete a small excess of reactant is vented to a hypochlorite scrubber. Past operating experience has demonstrated this step to be quantitative. The result being that no air contaminants are emitted.

The remaining process step has no air emissions. Vacuum systems and storage tanks will be vented to the scrubber system and/or carbon-containing drums. These will be used at final atmospheric vent points to trap fugitive odors/emissions.

Mr. John Ward
November 4, 1985
Page two

Hazardous Waste--The MTPO process does not generate any wastes which are specifically listed as hazardous. The aqueous phase of the first process step could be identified as reactive due to its mercaptan content. However, the waste will be treated in-process with hypochlorite such that mercaptan is converted to non-hazardous sulfate. The aqueous phase will then be biologically treated.

The final process step generates a 60 to 70 percent methyl alcohol waste which will be distilled and recycled back to the process. The aqueous phase and any residual alcohol will be sent to our biological treatment system.

Scrubber liquor, a non-hazardous material, will be mixed with other aqueous wastes and sent to the biological treatment system also. There are no other wastes generated which could be considered to be hazardous by characteristic.

Process equipment, storage tanks, and environmental control equipment will be the same as that used in the 1976 production. Since this process equipment has been previously permitted and no increases in emissions are currently foreseen, we do not anticipate formal modification to our operating permits. If the department has any questions, please call us.

Sincerely,

A handwritten signature in black ink, appearing to read "Joe E. Porter", with a stylized flourish at the end.

Joe E. Porter
Environmental Engineer

CC: J.W. Shackelford
J.H. Miles

JEP:rf

Rhone Poulenc Project

Client: The Agricultural Division of Rhone Poulenc U.S.A.

Project: To modify the Propanil Plant to produce an intermediate in the four step "Tackle" process. Subsequent two steps to be completed by RP's Texas and Tennessee plants respectively.

To modify the Lannate plant to complete the final processing step to technical Tackle.

Process: Step 1- (RP-15); potassium cresylate is formed from metacresol and KOH, and coupled with 3,4 - dichlorobenzotrifluoride, in DMAC solvent. The DMAC is stripped and recycled and the product water washed. Step 4 - (RP-15) RP-2 an intermediate from R-P is nitrated with mixed sulfuric/nitric acids in EDC solvent. The EDC is stripped and recycled and water substituted as solvent after forming the sodium salt of Tackle with NaOH.

Capital:	Initial estimate	\$ 75M	RP-15
		\$ 425M	RP-10

Final expenditures:	\$ 254M	RP-15 due to scope
	\$1,146M	RP-10 changes

Raw Materials: Provided by R-P

Waste: Paid by Cedar and invoiced to R-P with 15 day terms. On RP-10 Cedar eventually was able to treat onsite and charged R-P \$.08/lb RP-10.

Contract: RP-15

- \$435M processing fee for three months.
- Incremental production over targeted 684M lbs. charged at \$0.35/lb.
- Additional production time prorated based on \$175M/month.
- \$75M capital fee.

RP-10

- \$550M processing fee for three months.
- Incremental production over targeted 600M lbs charged at \$0.35/lb.
- Additional production time prorated based on \$200M/month.

d. \$425M capital fee.

	Three Year Option	
RP Finally Paid	Processing	Capital
RP-15	\$ 576M	\$195M
RP-10	<u>756M</u>	<u>525M</u>
	\$ 1332M	\$720M

Rhone Poulenc RPA 90946 (Cyclanilide)

Heat & Mass Balance

R.P. Basis 0.53 gallons (2 L)
 Cedar Basis 3,000.00 gallons
 Straight Line Multiplier 5,679.35

CONFIDENTIAL

Please fill

Assumptions:

1. Process overall 80% O.S.T.
2. 1.0% Material Loss through centrifugation
3. 0.5% Material Loss through drying
4. Centrifugation C/T=45 minutes @ 200 lb./plow

Selling Price

\$ 5.43 per lb. to make \$10k/day

		COUPLING REACTION					HYDROLYSIS REACTION			ACIDIFICATION		
Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Initial Charge	Na Methylate Sol'n	Azeo Distillat'n	CPDM Charge	Rxn Generat'd MeOH	Coupling Product	Water Charge	MeOH Distillat'n	Hydroly's Product	H ₂ SO ₄ Charge	Wet Final Product
Component	MW											
Raw Materials												
CPDM	158.10				1,970.8							
2,4 DCA	162.00	2,040.9										
NaOCH ₃	54.00		741.1									
MeOH	32.00		1,729.3	1,729.3								
H ₂ O	18.00							143.6			10.4	
H ₂ SO ₄	98.00										250.2	
Toluene	92.15	17,191.1		4,034.9								
(By) Products												
Na-CPMPA	310.10						2,473.9					
MeOH	32.00					797.8			398.9			
Na-RPA 90946	296.10									1,511.8		
RPA 90946	274.10											1,399.5
Na ₂ SO ₄	142.00										362.5	
Salts												
Others												
Total		19,232.0	2,470.4	5,764.2	1,970.8	797.8	2,473.9	143.6	398.9	1,511.8	623.1	1,399.5
Stream Weight (lb/batch)												
Stream Volume (gal)												
Temperature (°F)												
Pressure (psia, [torr])												
S.G.												
Cycle Time (hr)							12.0			5.0		1.0

"Front End"
Time Cycle

18.0

Rhone Poulenc RPA 90946 (C)

Heat & Mass Balance

R.P. Basis 0.53
Cedar Basis 3,000.00
Straight Line Multiplier 5,679.35

Assumptions:

1. Process overall 80% O.S.T.
2. 1.0% Material Loss through centrifugation
3. 0.5% Material Loss through drying
4. Centrifugation C/T=45 minutes @ 2

ISOLATION & DRYING											
Stream No.		12	13	14	15	16	17	18	19	20	21
Description		From Centrifug'n	Vent from Dryer	Dried Final Product	Totals						
Component	MW										
Raw Materials											
CPDM	158.10				1,970.8						
2,4 DCA	162.00				2,040.9						
NaOCH ₃	54.00				741.1						
MeOH	32.00				3,458.5						
H ₂ O	18.00	154.0	151.3	2.8	459.3						
H ₂ SO ₄	98.00				250.2						
Toluene	92.15										
(By) Products											
Na-CPMPA	310.10				2,473.9						
MeOH	32.00				1,196.7						
Na-RPA 90946	296.10				1,511.8						
RPA 90946	274.10	1,385.5		1,378.6							
Na ₂ SO ₄	142.00				362.5						
Salts	---										
Others	---										
Total		1,539.5	151.3	1,381.3							
Stream Weight (lb/batch)											
Stream Volume (gal)											
Temperature (°F)											
Pressure (psia, [torr])											
S.G.											
Cycle Time (hr)		5.2	12.0		35.2						
					17.2						

"Back End"
Time Cycle

Rhone Poulenc RPA 90946 (Cyclanilide)

Heat & Mass Balance

R.P. Basis 0.53 gallons (2 L)
 Cedar Basis 4,000.00 gallons
 Straight Line Multiplier 7,572.47

CONFIDENTIAL

Assumptions:

1. Process overall 80% O.S.T.
2. 1.0% Material Loss through centrifugation
3. 0.5% Material Loss through drying
4. Centrifugation C/T=45 minutes @ 200 lb./plow

Selling Price

\$ 4.07 per lb. to make \$10k/day

		COUPLING REACTION					HYDROLYSIS REACTION			ACIDIFICATION		
Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Initial Charge	Na Methylate Sol'n	Azeo Distillat'n	CPDM Charge	Rxn Generat'd MeOH	Coupling Product	Water Charge	MeOH Distillat'n	Hydroly's Product	H ₂ SO ₄ Charge	Wet Final Product
Component	MW											
Raw Materials												
CPDM	158.10				2,627.7							
2,4 DCA	162.00	2,721.2										
NaOCH3	54.00		988.1									
MeOH	32.00		2,305.7	2,305.7								
H2O	18.00							191.5			13.9	
H2SO4	98.00										333.6	
Toluene	92.15	22,921.5		5,379.9								
(By) Products												
Na-CPMPA	310.10						3,298.6					
MeOH	32.00					1,063.7			531.9			
Na-RPA 90946	296.10									2,015.8		
RPA 90946	274.10											1,866.0
Na2SO4	142.00										483.4	
Salts	---											
Others	---											
Total		25,642.7	3,293.8	7,685.6	2,627.7	1,063.7	3,298.6	191.5	531.9	2,015.8	830.8	1,866.0
Stream Weight (lb/batch)												
Stream Volume (gal)												
Temperature (°F)												
Pressure (psia, [torr])												
S.G.												
Cycle Time (hr)							12.0			5.0		1.0

"Front End"
Time Cycle

18.0

Rhene Poulenc RPA 90946 (C)

Heat & Mass Balance

R.P. Basis 0.53
Cedar Basis 4,000.00
Straight Line Multiplier 7,572.47

Assumptions:

1. Process overall 80% O.S.T.
2. 1.0% Material Loss through centrifugation
3. 0.5% Material Loss through drying
4. Centrifugation C/T=45 minutes @ 2

ISOLATION & DRYING											
Stream No.		12	13	14	15	16	17	18	19	20	21
Description		From Centrifug'n	Vent from Dryer	Dried Final Product	Totals						
Component	MW										
Raw Materials											
CPDM	158.10				2,627.7						
2,4 DCA	162.00				2,721.2						
NaOCH ₃	54.00				988.1						
MeOH	32.00				4,611.3						
H ₂ O	18.00	205.4	201.7	3.7	612.4						
H ₂ SO ₄	98.00				333.6						
Toluene	92.15										
(By) Products											
Na-CPMPA	310.10				3,298.6						
MeOH	32.00				1,595.6						
Na-RPA 90946	296.10				2,015.8						
RPA 90946	274.10	1,847.3		1,838.1							
Na ₂ SO ₄	142.00				483.4						
Salts	---										
Others	---										
Total		2,052.7	201.7	1,841.8							
Stream Weight (lb/batch)											
Stream Volume (gal)											
Temperature (°F)											
Pressure (psia, [torr])											
S.G.											
Cycle Time (hr)		7.0	12.0		37.0						
"Back End" Time Cycle					19.0						

To Neil

Date _____ Time _____

WHILE YOU WERE OUT

M Johnny Hanna

of _____

Phone _____

Area Code	Number	Extension
TELEPHONED	PLEASE CALL	
CALLED TO SEE YOU	WILL CALL AGAIN	
WANTS TO SEE YOU	URGENT	
RETURNED YOUR CALL		

Message _____

Cost. # Rhone - Paulane

for inv. purposes is

735000

C 3625-4340

Operator _____



AMPAD
EFFICIENCY®

23-000 60 SHT. PAD
23-001 250 SHT. DISPENSER BOX

75 97

SECRECY AGREEMENT

THIS AGREEMENT, made this 8th day of August, 1980, by and between RHONE-POULENC INC., a New York State corporation, having its principal place of business at Black Horse Lane, Monmouth Junction, New Jersey 08852, (hereinafter referred to as "RP INC.") and VERTAC CHEMICAL CORPORATION, a Delaware corporation, having its principal place of business at 5100 Poplar Avenue, Memphis, Tennessee 38137, (hereinafter referred to as "VERTAC").

WHEREAS, RP INC. desires to enter into negotiations with VERTAC leading to the possible acquisition by RP INC. of part or all of the assets of VERTAC; and

WHEREAS, VERTAC possesses technical information, know-how and other trade secrets which RP INC. desires to review in connection with its acquisition study; and

WHEREAS, VERTAC wishes to disclose such information to RP INC. as a basis for negotiations leading to a possible agreement between the parties.

NOW, THEREFORE, the parties agree as follows:

1. The technical information, know-how and trade secrets disclosed by VERTAC to RP INC. hereunder and designated by VERTAC in writing to be confidential shall, for a period of ten (10) years from the date of this Agreement, be kept strictly confidential by

RP INC. and will not be duplicated, except for limited internal circulation, or disclosed to other parties, or used without prior written approval of VERTAC, except that such information may be disclosed to such employees of RP INC. as reasonably require the same for the aforesaid purposes; and provided further that RP INC. shall take the same reasonable precautions against disclosure to other parties that RP INC. uses with respect to its own information of a similar nature. Information disclosed orally will be considered non-confidential unless within thirty (30) days after such oral disclosure a written disclosure is submitted to RP INC. containing the information which was orally disclosed, and confirming the confidential nature of such information.

2. The obligations set forth in paragraph 1 hereof shall not apply to:

- (a) information which is now or later becomes publicly known through no fault of RP INC.;
- (b) information which RP INC. obtains from a third party entitled to disclose it;
- (c) information which was already known to RP INC. at the time of its disclosure hereunder, as supported by prior written records.

3. RP INC. agrees to return, at VERTAC's request, all documents furnished by VERTAC pursuant to this Agreement and not to retain copies or other records of the information contained therein; provided,

however, that RP INC. may place, under seal, one copy of such documents and records, under the custody of its General Counsel, to be opened only in the event that a claim for breach of this Agreement should be asserted against RP INC. on behalf of VERTAC, and provided further that RP INC. shall continue to be bound by the prohibitions and precautions regarding disclosure and use of such records and documents set forth herein.


4. Nothing contained in this Agreement shall be deemed to grant RP INC. a license to use any confidential information disclosed to it hereunder.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first above written.

VERTAC CHEMICAL CORPORATION

By: 

RHONE-POULENC INC.

By: 
Jean-Paul Marx
Vice President - Finance
and Administration



INTERNAL CORRESPONDENCE

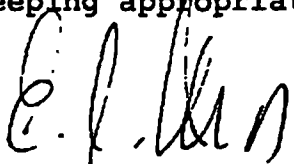
DATE: August 13, 1980

TO: C. P. Bomar D. L. Lambert FROM: E. A. Munoz
L. E. Harcrow J. J. O'Neill
R. S. Kirk
G. B. Gammal
R. A. Guidi

CC: SUBJECT: Rhone-Poulenc Inc. ✓

In order to insure uniformity and comparability in reporting standards and in general to avoid confusion, we have agreed with Mr. Boisdé that he will communicate directly with me in all matters relating to technology, costs, investments, and business analysis. Mr. Guidi will attend to Mr. Boisdé if I am absent from the office, and Mr. Peltzman will be our contact when Mr. Boisdé is not available.

Mr. Harcrow will originate and/or check all statistical data and will be responsible for keeping appropriate files.



E. A. Munoz

EAM:ap



INTERNAL CORRESPONDENCE

DATE: August 7, 1980

TO E. A. Munoz


FROM: J. J. O'Neill

CC: R. A. Guidi
C. P. Bomar

SUBJECT:

J. Sibeud called to say that they have signed the Secrecy Agreement and would like to send two engineers here next week. They have designated Paul Boisdé and Steve ~~Palzaen~~ *PELTZMAN* and their plan is to proceed to fly to Jackson Monday afternoon and proceed to Vicksburg. They have asked specifically that if at all possible that they be met by Mr. Guidi and that he lay out the work schedule with them for the examination of Vicksburg and West Helena.

I told Sibeud that we would make every effort to have Ray available and that during the course of their visit I would expect that Ray may have Pat Bomar share with him the responsibility for getting the data that they need.



J. J. O'Neill

JJO'Neill

ADEQ0017699

8-6-80

Telegraphed
Security Agent
from to
Be Succeeded

OK



VERTAC CHEMICAL CORPORATION

24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

TELEX 53927

August 1, 1980

Mr. J. P. Marx
Agricultural Division
Rhone Poulenc, Inc.
P. O. Box 125
Monmouth Junction, New Jersey 08852

Dear Mr. Marx:

Mr. O'Neill has asked that the enclosed copy of
the Vertac Chemical Corporation Financial State-
ments as of December 31, 1979, be forwarded to
you.

Sincerely yours,

(Miss) Anne Pekovich
Secretary to John J. O'Neill

ap

Enclosure

ADEQ0017699



INTERNAL CORRESPONDENCE

DATE: August 18, 1980

TO: C. P. Bomar
J. C. Bumpers
R. A. Guidi
~~XXXXXXXXXX~~
G. F. Mather
E. A. Munoz
J. J. O'Neill

FROM: L. E. Harcrow

CC:

SUBJECT: Information Furnished
to Rhone-Poulenc, Inc.

Attached is a list of information furnished to Rhone-Poulenc,
Inc. during their Vertac visit.

LEH:ew

Attachment

ADEQ0017678

INFORMATION FURNISHED TO RHONE-POULENC, INC.A. MATERIAL FURNISHED TO MR. W. CLAPPER AS OF AUGUST 14, 1980:

1. Copy of UC Investment Proposal No. 77-1 of 7/21/77.
2. General Information - Vertac Custom Manufacturing - (F. B. Lane).
3. Copy of SRI International preliminary draft of revised draft of Chemical Economics Handbook - (S. V. Kulkarni).
4. Copies of organization charts of 4 plants as of 8/12/80, as well as Employee Staffing Summary as of 8/12/80.
5. Listing of Vertac Registrations - 2 copies.
6. List of Supplemental Registrations updated 1/30/78 - (S. V. Kulkarni); as well as listing compiled 12/1/77 - (S. V. Kulkarni) - 2 copies.
7. Copy of letter directed to S. V. Kulkarni by A. T. Malone concerning FIFRA Data Compensation Claims dated 5/16/80.
8. Blue binder containing listing of 1979 State Label Registrations - 2 copies.
9. White binder entitled "1979-1980 Sales Comparison by Account and Assignment."
10. Copy of Dinitro Sales Analysis 1979-1980; 2,4-D Analysis; Comparative Actual Sales Prices KNO₃.
11. Copy of Memo from S. V. Kulkarni directed to G. T. Manley concerning potential market for 2,4-D.
12. Computer printout report "Sales by Product by Customer" as of 6/30/80.
13. Photocopy of P/W Audited Statement for December 31, 1979, together with copy of P/W letter to Shareholders and Board.
14. Blue binder entitled "Vertac, Inc. Product Specification Sheets" - (S. V. Kulkarni).
15. Binder entitled "Vertac Toxaphene 90, an Insecticidal Toxicant" - (S. V. Kulkarni).
16. Copies of Inventory Schedules as of 8/1/80 for each of 4 plants - (J. Hanna).
17. Copies of Custom Processing (Tolling) Fact Sheet (Schedule C and A) as of 7/25/80, marked "Confidential."

18. Copies of Sales and Gross Margin Schedules for 1979 and 1980, by plant, by product, by month - (J. Hanna).
19. 1981 Sales Forecast - (J. Hanna).
20. Vertac Financial Statement - June 30, 1980 - (J. Hanna).

B. MATERIAL FURNISHED TO MR. PELTZMAN AND MR. BOISDE

1. Monochloroacetic Acid:
 - a. Major Project Proposal - (L. Hacrow).
 - b. General Process Description - 10 MM Lbs./Year - Potential Licensee - (T. Bridger).
 - c. Simplified Process Flow Diagram - 97% - (T. Bridger).
 - d. Simplified Process Flow Diagram - 99% - (T. Bridger).
 - e. Set of PID's - 24 MM Lbs./Year Plant - (T. Bridger).
 - f. Set of PFD's with Material Balance - (T. Bridger).
 - g. Equipment Layout for MCA at Vicksburg - Methyl Parathion Plant - (T. Bridger).
 - h. Equipment List for 24 MM Lbs./Year Plant - (T. Bridger).
2. Simplified Process Flow Diagram - 2,4-D - (T. Bridger).
3. Copy of Agreement with Gulf Re: Gulf's plant on Vicksburg site) - (Bumpers).
4. Unit Cost Report:
 - a. Vicksburg - 6/30/80 and 12/31/79.
 - b. W. Helena - 6/30/80.
5. OSHA Report of Inspections dated 6/29/76 and 10/27/78 for Vicksburg - (M. Hawkes).
6. Employee Benefit Programs - Summary letter and supporting detail - (J. Goryance).
7. Copy of Chart of Accounts - (L. Harcrow).
8. Employee Listing - Vicksburg - Showing name, adress, social security number, sex, etc. (no salary information) - (D. Walker).

9. Product Specification Sheets - All Products - (R. Guidi).
10. Process Technology - Existing and Proposed Products (Booklet prepared by Tech Center) - (R. Guidi).
11. Custom Manufacturing - (G. Mather). Gave samples of:
 - a. Secrecy Agreement
 - b. Letter of Intent
 - c. Contract
12. Capital Expenditure Summary (\$12.6 MM) Proposed 1981 - (E. A. Munoz).
13. Manufacturing Cost Estimates - (L. Harcrow) - Atrazine 4-L; MCA-97% and 99%; Methyl Parathion; 2,4-DCA; 2,4-D Acid via Water Process; 2,4-DCP via Sulfuryl Chloride; DNOC.
14. Product Manufacturing Cost - Vicksburg - All Products - Actual 1979 and YTD 1980.
15. Insurance Coverages - Type, Cost, etc. - (J. Bumpers).
16. KNO₃ Selling Prices - Letter dated 7/1/80 - (N. Morgan).
17. Property Tax Assessment - 1979 - Vicksburg - (D. Walker).
18. Income Statement - 6/30/80 - Vicksburg - (D. Walker).
19. Capital Appropriation Policy - (L. Harcrow).
20. Capital Expenditure Status Report - 6/30/80 - (J. Hanna).
21. Methyl Parathion Explosion Report - (M. Hawkes).
22. Nitric Acid Plant Study - Prepared by B. McAvoy - (R. Guidi).
23. KNO₃ Manufacturing Cost Net of CL₂ - (L. Harcrow).
24. Executive Payroll - Total Dollars only - (J. Bumpers).
25. Asset Ledger - Vicksburg and West Helena.
26. Environmental Data - (D. Karkkainen).
 - a. Summary Note
 - b. NPDES Permits - Vicksburg and West Helena
 - c. Air Emission Survey - Vicksburg

27. Plant Property Survey - Vicksburg and West Helena.
28. Overall Plot Plan - Plant - Vicksburg and West Helena.
29. List of offsites, utilities, major buildings, rail facilities, waste treatment, etc. - Vicksburg and West Helena.
30. P&ID's for Propanil, BSC, Atrazine, Toxaphene, Dinitro, Parathion, KNO₃/CL₂.
31. Plot plan and equipment list for all units - Vicksburg and West Helena.

L. E. Harcrow

LEH:ew



INTERNAL CORRESPONDENCE


DATE: August 18, 1980

TO: C. P. Bomar
J. C. Bumpers
R. A. Guidi
R. S. Kirk
G. F. Mather
~~XXXXXXXXXXXX~~
J. J. O'Neill

FROM: L. E. Harcrow

SUBJECT: Information Furnished
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ADEQ0017694

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 - e. Set of PID's - 24 MM Lbs./Year Plant - (T. Bridger).
 - f. Set of PFD's with Material Balance - (T. Bridger).
 - g. Equipment Layout for MCA at Vicksburg - Methyl Parathion Plant - (T. Bridger).
 - h. Equipment List for 24 MM Lbs./Year Plant - (T. Bridger).
2. Simplified Process Flow Diagram - 2,4-D - (T. Bridger).
3. Copy of Agreement with Gulf Re: Gulf's plant on Vicksburg site) - (Bumpers).
4. Unit Cost Report:
 - a. Vicksburg - 6/30/80 and 12/31/79.
 - b. W. Helena - 6/30/80.
5. OSHA Report of Inspections dated 6/29/76 and 10/27/78 for Vicksburg - (M. Hawkes).
6. Employee Benefit Programs - Summary letter and supporting detail - (J. Goryance).
7. Copy of Chart of Accounts - (L. Harcrow).
8. Employee Listing - Vicksburg - Showing name, adress, social security number, sex, etc. (no salary information) - (D. Walker).

9. Product Specification Sheets - All Products - (R. Guidi).
10. Process Technology - Existing and Proposed Products (Booklet prepared by Tech Center) - (R. Guidi).
11. Custom Manufacturing - (G. Mather). Gave samples of:
 - a. Secrecy Agreement
 - b. Letter of Intent
 - c. Contract
12. Capital Expenditure Summary (\$12.6 MM) Proposed 1981 - (E. A. Munoz).
13. Manufacturing Cost Estimates - (L. Harcrow) - Atrazine 4-L; MCA-97% and 99%; Methyl Parathion; 2,4-DCA; 2,4-D Acid via Water Process; 2,4-DCP via Sulfuryl Chloride; DNOC.
14. Product Manufacturing Cost - Vicksburg - All Products - Actual 1979 and YTD 1980.
15. Insurance Coverages - Type, Cost, etc. - (J. Bumpers).
16. KNO₃ Selling Prices - Letter dated 7/1/80 - (N. Morgan).
17. Property Tax Assessment - 1979 - Vicksburg - (D. Walker).
18. Income Statement - 6/30/80 - Vicksburg - (D. Walker).
19. Capital Appropriation Policy - (L. Harcrow).
20. Capital Expenditure Status Report - 6/30/80 - (J. Hanna).
21. Methyl Parathion Explosion Report - (M. Hawkes).
22. Nitric Acid Plant Study - Prepared by B. McAvoy - (R. Guidi).
23. KNO₃ Manufacturing Cost Net of CL₂ - (L. Harcrow).
24. Executive Payroll - Total Dollars only - (J. Bumpers).
25. Asset Ledger - Vicksburg and West Helena.
26. Environmental Data - (D. Karkkainen).
 - a. Summary Note
 - b. NPDES Permits - Vicksburg and West Helena
 - c. Air Emission Survey - Vicksburg

27. Plant Property Survey - Vicksburg and West Helena.
28. Overall Plot Plan - Plant - Vicksburg and West Helena.
29. List of offsites, utilities, major buildings, rail facilities, waste treatment, etc. - Vicksburg and West Helena.
30. P&ID's for Propanil, BSC, Atrazine, Toxaphene, Dinitro, Parathion, KNO_3/CL_2 .
31. Plot plan and equipment list for all units - Vicksburg and West Helena.

L. E. Harcrow

LEH:ew



VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

TELEX 53927

September 2, 1980

Mr. Stephen A. Peltzman
Manager, Project Services and Planning
Rhone-Poulenc Inc.
120 Jersey Avenue
New Brunswick, New Jersey 08903

Dear Steve:

Enclosed are the following items you requested:

1. Confidential payroll listing amounting to \$110,000 monthly.
2. Memphis Office Expense (detail) for the year 1979.
3. Exempt payroll (in addition to item 1 above) - detail by individual.

Please call if you have any questions.

Sincerely yours,


Lloyd E. Harcrow

LEH:ap

Attachments

ADEQ0017675



INTERNAL CORRESPONDENCE

DATE: August 13, 1980

TO. C. P. Bomar D. L. Lambert FROM E. A. Munoz
L. E. Harcrow J. J. O'Neill
R. S. Kirk
G. B. Gammal
R. A. Guidi

CC: . SUBJECT: Rhone-Poulenc Inc.

In order to insure uniformity and comparability in reporting standards and in general to avoid confusion, we have agreed with Mr. Boisdé that he will communicate directly with me in all matters relating to technology, costs, investments, and business analysis. Mr. Guidi will attend to Mr. Boisdé if I am absent from the office, and Mr. Peltzman will be our contact when Mr. Boisdé is not available.

Mr. Harcrow will originate and/or check all statistical data and will be responsible for keeping appropriate files.

E. A. Munoz

EAM:ap

ADEQ0017675



INTERNAL CORRESPONDENCE

DATE: August 20, 1980

TO: File

FROM: G. F. Mather

CC: R. A. Guidi
+ R. B. Kirk
E. A. Munoz
M-304-109

SUBJECT: Rhone Poulenc Visit

From August 12th to 15th I reviewed Vertac Chemical's operations with Messrs. Steve Peltzman and Paul Boisdé. The tone of the review was quite good at the Vicksburg plant, West Helena plant, and the Memphis office. Mr. Peltzman is a thorough cost analysis engineer. Mr. Boisdé was similarly thorough in process evaluation. In general terms, Mr. Peltzman's off the cuff valuation of the Vicksburg and West Helena plants was quite similar to my own broad brush opinion. My own cost figures in turn had been discussed with E. Munoz, R. Guidi, and P. Bomar previously. My main concern would be timing. It would appear that these very thorough individuals would require considerable time for their respective evaluations.

On August 9th I made a followup telecon with Steve Peltzman. Paul Boisdé is on vacation this week as is Dr. Jacques Sibeud. Steve indicated the only information not received was an insurance company assessment of the plant valuations (a volume for each plant) which was fairly up to date. Mr. Bumpers had these volumes during his review with Steve Peltzman. I don't know if Vertac wanted to send this information, but Steve said it would save him a lot of time.

George Mather

:tes

ADEQ0017675



VERTAC CHEMICAL CORPORATION
24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-787-8851

TELEX 83927

September 18, 1980

Mr. D. G. Harris
President
Rhone-Poulenc Inc.
Agricultural Division
P. O. Box 125
Monmouth Junction, New Jersey 08852

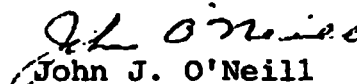
Dear George:

Thank you for the call this morning to advise the status of your acquisition studies of certain of Vertac's assets.

We will be pleased to provide any supplemental information that may be necessary in order to complete your management presentation which you advise is scheduled for October 2.

Enclosed is a list of principal equipment at the Vertac Vicksburg, West Helena, and West Memphis facilities which you requested.

Sincerely yours,


John J. O'Neill
Vice Chairman of the Board
and Chief Operating Officer

JJO'N:ap

Enclosure

ADEQ0017683

WEST MEMPHIS
EQUIPMENT LIST - HERBICIDE UNIT

I. Reactors

- A. 2,000 gallon, glass, agitated, full vacuum to 100 psi internal, 90 psi jacket.
- B. 4,000 gallon, glass, agitated, full vacuum to 100 psi internal, 90 psi jacket.
- C. 3,500 gallon, 347 ss, agitated, full vacuum to 150 psi internal, 75 psi jacket.

II. Slurry Storage

- A. 6,000 gallon, 316 ss, atmospheric
- B. 10,000 gallon, 316 ss, atmospheric

III. Centrifuge

48" x 30", 316 ss

IV. Rotary Vacuum Dryer

60 sq. ft., 316 ss, full vacuum, 15 psi jacket.

V. Auxiliaries

Bulk raw material and recycle storage
Refrigeration - 200 tons @ 20°F
HCl/SO₂ scrubber system
Full instrumentation, temp. and press @ RX's
N₂/dry air transfer and purge system @ RX's
Steam jet vacuum system (10MM hg)
Solvent recovery system (overhead)
Slurry system w/long radius piping & slurry pumps
Final filter at end of slurry system
Electronic weigh cells @ RX's
Emergency process sump (5,000 gallons)
Gravity raw material measuring bottles above RX's
Auxiliary glass/steel vessels for intermediates storage
Bulk raw material and recycle storage

WEST MEMPHIS

EQUIPMENT LIST-SPECIALTY CHEMICAL UNIT

I. Reactors

- A. 17,000 gallon, 316L ss, full vacuum to 60 psi internal, 150 psi jacket. 560 sq. ft. of jacketed heat-transfer area for either steam heating or water cooling. Nozzles (excluding jacket): 4-2", 2-3", 6-4", 2-14" (one for agitator), and 2,-23" (one for manway). Vessel is insulated. AUXILIARIES:
- a) Electronic weighing system, 200,000 lbs. in 10 lbs. increments. Howe.
 - b) 10 hp, 50 rpm, dual axial flow turbine agitator. All wetted parts 316ss. Lightnin' model 85.
 - c) 2 X 3 - 13, 316 ss, centrifugal pump with 50 hp, 1750 rpm motor. Goulds model 3196.
 - d) 1,000 sq. ft. exchanger, 4-pass tube, 2-pass shell, piped for circulation heating or cooling using the above pump, 304 ss, 75 psi shell; 304 ss, 150 psi tubes. Exchanger is also piped to condense and either collect or recycle vapors from reactor.
 - e) 750 sq. ft. exchanger piped for feed pre-heating or vaporization. 316 ss, 150 psi shell; 316 ss, 150 psi tubes.
 - f) 2-stage steam jet ejector with vacuum capability to 27" Hg. Schutte-Koerting.
- B. 4,000 gallon, 304 ss, full vacuum to 90 psi internal, 150 psi jacket. 280 sq. ft. of jacketed heat-transfer area for either steam heating or water cooling. Nozzles (excluding jacket): 2-2", 2-3", 4-4", 1-10", 1-16" (agitator), 1-18" (manway). Vessel is insulated. AUXILIARIES:
- a) Electronic weighing system, 5 lb. increments. Toledo.
 - b) 7- $\frac{1}{2}$ hp, 56 rpm, dual axial flow turbine agitator. All wetted parts 316 ss. Lightnin' model 84S.
 - c) 3 x 3, 316 ss positive displacement pump with 10 hp motor. Viking model LL4724.
 - d) 450 sq. ft. exchanger, 2-pass tube, 1-pass shell, piped for circulation heating or cooling using above pump. 316 ss, 150 psi tubes; carbon steel, 150 psi shell.
 - e) 350 sq. ft. condenser, 316 ss tubes, carbon steel shell.
 - f) 2-stage steam jet ejector with vacuum capability to 28" Hg. Schutte-Koerting.
 - g) Dual 350 gallon, 304 ss vacuum receivers

VICKSBURG PLANTTOXAPHENE

- 5 - 2,000-Gal. Pfaudler, Glass-lined, Standard Chlorinators (3)/Stripper (1)/Decanter
- 1 - 4,000-Gal. Pfaudler, Glass-lined, Standard
- 1 - 3,000-Gal. Pfaudler, Glass-lined, Chemstor
- 1 - Falling Film - HCl Absorber
- 1 - 30,000-Gal. Carbon Steel Storage
- 1 - 22,000-Gal. Carbon Steel Storage
- 4 - 30,000 Gal. Aluminum Storage

DNBP

- 1 - 4,000-Gal. Pfaudler, Glass-lined, Standard
- 1 - 7,500-Gal. SS316, Agitated Reactor
- 1 - 2,500-Gal. SS316, Agitated Reactor
- 1 - 12,000-Gal. SS316 with Coil Storage Tank
- 1 - 18,000-Gal. SS316 with Coil Storage Tank
- 1 - 30,000-Gal. SS316 with Heater Settling Tank
- 2 - 12,000-Gal. Carbon Steel Acid Storage
- 2 - 24,000-Gal. Carbon Steel OSBP Storage
- 1 - 6,000-Gal. SS316 Blend Tank on Scale
- 1 - 8,000-Gal. SS316, Decanter Tank

ATRAZINE

- 2 - 5,000-Gal. SS316 Reactors
- 1 - 15,000-Gal. Filtrate Holding Tank, Carbon Steel
- 1 - 250 ft.² Rotary Vacuum Filter
- 1 - Scrubber System (Fume Control/Solvent Recovery)
- 1 - 5,000-gal. SS316 Reboiler

ATRAZINE (Continued)

- 1 - 285-Ton, Refrigeration, York, @ 0°F with 10,000-Gal. Brine Storage
- 1 - 300-Ton, Refrigeration, Frick, @ -20°F with 23,000-Gal. Brine Storage
- 1 - 15,000-Gal. SS316, Filter Feed Tank
- 1 - Spray Dryer SS316, Bowen, 4.8MM BTU/Hour
- 1 - Spray Dryer SS316, Niro-Nichols, 2.2MM BTU/Hour

METHYL PARATHION (IDLE)

- 1 - 4,000-Gal. Pfaudler
- 1 - 1,000-Gal. Pfaudler
- 1 - 50 Ft.² SS316, Pfaudler Evaporator
- 1 - 4,000-Gal. SS316, Jacketed Reactor
- 1 - 5,000-Gal. SS316, Storage Tank
- 1 - 4,000-Gal. SS316, Storage Tank
- 2 - 4,000-Gal. SS316, Decanters
- 2 - 1,500-Gal. SS316, Receivers
- 1 - 200-Ton, 60°F Chilled Water System, Croll-Reynolds
- 1 - 285-Ton, Refrigeration 0°F with 17,000-Gal. Brine Storage
- 1 - Methanol Distillation Column
- 2 - 3'x10' SS316, Resin Beds

HNO₃ UNITS

- 2 - 60-Ton/Day DuPont Design, 55% Acid
- 1 - 120-Ton/Day DuPont Design, 55% Acid
- 2 - Horton Spheres, Ammonia Storage, 1,500-Ton each
- 6 - 300-Ton SS304, Acid Storage Tanks

FERTILIZER SOLUTION/STORAGE

- 3 - 40,000-BBL Storage Each, 1 Operational, 2 Requires Repairs
- 1 - 16,000-Gal. SS304, Neutralizer
- 2 - 30,000-Gal. Aluminum Blend Tanks on Scales
- 2 - 12,000-Gal. Aluminum Tanks
- 1 - 10,000-Gal. Aluminum Tanks

SOUTH PLANT UTILITIES

- 2 - Water Tube, Steam Boilers, 1 Gas/Oil, 1 Gas only; 110,000 Lbs. Per Hour Each @ 450 psi - Idle
- 1 - Cooling Tower, 40,000 gpm - Idle; 8 Cells, Turbine-Driven Pumps
- 1 - Compressor 17,000 SCFM @ 100 psi, Steam Turbine Driven - Idle
- 1 - Compressor 13,000 SCFM @ 100 psi, Steam Turbine Driven - Idle
- 1 - Compressor 20,000 SCFM @ 120 psi, Electric-Driven
- 1 - Cooling Tower, 10,000 gpm; 2 Cells, Electric-Driven Pump

KNO₃ UNIT - 90,000-TON KNO₃, 30,000-TON CHLORINE PER YEAR

- 1 - Bulk Raw Material (Muriate) Storage and Handling System, 2 Bins @ 750-Ton Each, Elevators, Etc.
- 1 - 900-Ton Refrigeration, Turbine-Driven
- 1 - Reaction System, 3 Columns
- 1 - Chlorine Distillation Column
- 1 - NO₂ Distillation Column
- 1 - Evaporator System, 3 Crystallizers
- 2 - Centrifuges
- 1 - Dryer 5'Ø x 36', Rotary
- 1 - Cooler, 8'x60', Rotary
- 1 - Prilling Tower
- 1 - Screening System, 2 Sweco Screens

KNO₃ UNIT (Continued)

- 2 - Bagging Systems - 1/100-Lb. Bags; 1/50-Lb. Bags; With Loading Facilities
- 1 - Chlorine Storage Tank and Associated Loading Facilities for Bulk and Cylinder Shipments
- 1 - N₂O₄ Storage Tank with Associated Loading Facilities for Bulk and Cylinder Shipments
- 1 - Strong Acid Unit; Produces 85% HNO₃ Acid for Reaction System
- 2 - Buildings, Bulk Product Storage Facilities with Associated Materials Handling, 25,000-Ton Capacity
- 1 - 86,000-lb./Hour, Foster Wheeler, 560 psig, Oil/Gas
- 1 - 115,000-Lb./Hour, Erie City Boiler, 550 psig, Oil/Gas
- 1 - 27,800-Lb./Hour, B/W Boiler, 200 psig, Gas Only
- 2 - Deionized Water Systems, 100 gpm
- 2 - Cooling Tower, 1/7,500 gpm; 1/3,500 gpm

IDLE EQUIPMENT

- 5 - 2,000-Gal. Pfaudler Reactors
- 1 - 1,500-Gal. Pfaudler Reactor, Glass-Lined, Chemstor
- 1 - 1,000-Gal. Pfaudler Reactor
- 5 - 2,000-Gal. Pfaudler, Glass-lined Reactors
- 1 - 1,500-Gal. Pfaudler, Glass-lined Reactor with Agitator
- 1 - 1,000-Gal. Pfaudler, Glass-lined Reactor
- 1 - 3,000-Gal. Pfaudler, Glass-lined Chemstor
- 1 - 30-Ton, Refrigeration Unit, Dunham-Bush at -30°F
- 1 - Column, Pfaudler, Glass-lined, 30"Ø x 10'

UNIT I

- 1 - 800-Gal. SS316, Agitated Jacketed Reactor
- 4 - 1,500-Gal. Pfaudler, Glass-Lined, Standard Reactors
- 2 - 3,000-Gal. Pfaudler DeDietrich, Glass-lined, Standard Reactors
- 1 - 1,000-Gal. DeDietrich, Glass-lined, Reactor
- 2 - Scrubbers, FRP, 18"Ø x 20'
- 1 - 12,000-Gal. Glass-lined Storage Tank
- 1 - 20,000-Gal. Carbon Steel Storage Tank
- 1 - 20,000-Gal. Carbon Steel Storage Tank
- 1 - 15,000-Gal. Carbon Steel Solvent Storage Tank
- 3 - 12,000-Gal. FRP Storage Tank
- 1 - 12,000-Gal. Aluminum Storage Tank

UNIT II

- 1 - 2,000-Gal. SS316 Jacketed Agitated Reactor with Column
- 1 - 2,000-Gal. Pfaudler, Glass-lined, Reactor with Glass Column (Corning)
- 2 - 15,000-Gal. SS304, Agitated Formulating Tank
- 1 - 17,000-Gal. Carbon Steel, Lined Product Holding Tank
- 1 - Packaging Line with Filler

UNIT III - (IDLE)

- 1 - 3,000-Gal. Pfaudler, Glass-lined, Standard with Overheads for Distillation
- 1 - 4,000-Gal. Pfaudler, Glass-lined, Standard Reactor
- 1 - Scrubber FRP, 2'Ø x 20'
- 3 - 20,000-Gal. Carbon Steel Storage Tanks
- 1 - 20,000-Gal. SS304, Storage Tank
- 1 - 17,000-Gal. SS304, Storage Tank

UNIT III - IDLE EQUIPMENT (Continued)

- 1 - 15,000-Gal. Pfaudler, Chemstor Glass-lined
- 1 - 6,000-Gal. SS316, Storage Tank
- 1 - 6,000-Gal. Carbon Steel, Storage Tank
- 1 - 5,000-Gal. Pfaudler, Chemstor

UNIT IV (IDLE)

- 1 - 4,000-Gal. Pfaudler, Glass-lined, Reactor with Overhead Systems and Receiver (SS)
- 1 - 3,000-Gal. DeDietrich, Glass-lined Reactor with Overhead Systems and Receiver (SS)
- 1 - 3,000-Gal. Carbon Steel Reactor with Coils
- 1 - 17,000-Gal. SS316, Agitated Slurry Tank
- 1 - 8,800-Gal. SS316, Agitated Formulation Holding Tank
- 1 - 4,000-Gal. SS304, Agitated Formulating Tank
- 1 - 20,000-Gal. Carbon Steel Storage Tank
- 1 - 15,000-Gal. Carbon Steel Storage Tank
- 1 - Packaging Line with Crandall Filler and Fume Exhausting System

UNIT V

- 1 - 35,000-Gal. SS347, Blaw-Knox Reactor
- 1 - 2,000-Gal. SS316, Cole Reactor
- 1 - 20,000-Gal. Aluminum Storage Tank
- 1 - 20,000-Gal. Carbon Steel Storage Tank
- 1 - 12,000-Gal. Carbon Steel Storage Tank
- 1 - 10,000-Gal. Carbon Steel Storage Tank

UTILITIES

- 3 - Boilers (Fire Tube); 2/10,000 Lb./Hour; 1/3,000 Lb./Hour
- 2 - Gas/Oil Fired, Small Unit Gas-Fired, 150 psi

- 1 - Hot Oil Heater (Struthers-Wells), Gas-Fired, 1.6MM BTU/Hour
- 3 - Marley Cooling Tower; 2/1,000 gpm; 1/700 gpm
- 2 - 200-Ton Dunham-Bush Refrigeration Units with 15,000-Gal. and 10,000-Gal. Brine Storage @ 00F/200F
- 1 - Norwalk Hydrogen Compressor, 4-Stage, Discharge 2,500 psig (max.)
- 1 - Nitrogen Service Unit, 9,000-Gal. Capacity
- 1 - Truck Weighing Scale
- 1 - Complete Biological Wastewater Treatment System with Permitted Discharge 90,000-Gal./Day

IDLE EQUIPMENT

- 1 - 4,000-Gal. Pfaudler, Glass-lined, Standard Reactor



VERTAC CHEMICAL CORPORATION

24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-8851

TELEX 53927

February 10, 1981

Mr. William Clapper
Group Product Manager
Agrochemical Division
Rhone-Poulenc Inc.
P. O. Box 125
Monmouth Junction, New Jersey 08852

Dear Mr. Clapper:

Our records show that in addition to the material which you returned on January 5, 1981, the following information had been furnished to you:

Copy of UC Investment Proposal No. 77-1 of 7/21/77.

Listing of Vertac Registrations (2 copies).

List of Supplemental Registrations updated 1/30/78 - (S. V. Kulkarni); as well as listing compiled 12/1/77 - (S. V. Kulkarni) (2 copies) - Only one copy was returned.

Copy of letter directed to S. V. Kulkarni by A. T. Malone concerning FIFRA Data Compensation Claims dated 5/16/80.

Blue binder containing list of 1979 State Label Registrations (2 copies) - Only one copy was returned.

Copy of Dinitro Sales Analysis 1979-1980; 2,4-D Analysis; Comparative Actual Sales Prices KNO₃.

Copy of Memo from S. V. Kulkarni directed to G. T. Manley concerning potential market for 2,4-D.

Copies of Inventory Schedules as of 8/1/80 for each of four plants (J. Hanna).

Copies of Sales and Gross Margin Schedules for 1979 and 1980, by plant, by product, by month (J. Hanna).

1981 Sales Forecast (J. Hanna).

We would appreciate the prompt return to us of the above-listed items.

Sincerely yours,

JJO'N:ap

*See: C. P. Hanna
X E Hanna*

John J. O'Neill
John J. O'Neill

ADEQ0017660

INFORMATION FURNISHED TO RHONE-POULENC, INC.A. MATERIAL FURNISHED TO MR. W. CLAPPER AS OF AUGUST 14, 1980:

1. Copy of UC Investment Proposal No. 77-1 of 7/21/77.
- ✓ 2. General Information - Vertac Custom Manufacturing - (F. B. Lane).
- ✓ 3. Copy of SRI International preliminary draft of revised draft of Chemical Economics Handbook - (S. V. Kulkarni).
- ✓ 4. Copies of organization charts of 4 plants as of 8/12/80, as well as Employee Staffing Summary as of 8/12/80.
5. Listing of Vertac Registrations - 2 copies.
- ✓ 6. List of Supplemental Registrations updated 1/30/78 - (S. V. Kulkarni); as well as listing compiled 12/1/77 - (S. V. Kulkarni) - 2 copies. *- only one copy rec'd*
7. Copy of letter directed to S. V. Kulkarni by A. T. Malone concerning PIFRA Data Compensation Claims dated 5/16/80.
- ✓ 8. Blue binder containing listing of 1979 State Label Registrations - 2 copies. *- only one copy rec'd*
- ✓ 9. White binder entitled "1979-1980 Sales Comparison by Account and Assignment."
10. Copy of Dinitro Sales Analysis 1979-1980; 2,4-D Analysis; Comparative Actual Sales Prices KNO₃.
11. Copy of Memo from S. V. Kulkarni directed to G. T. Manley concerning potential market for 2,4-D.
- ✓ 12. Computer printout report "Sales by Product by Customer" as of 6/30/80.
- ✓ 13. Photocopy of P/W Audited Statement for December 31, 1979, together with copy of P/W letter to Shareholders and Board.
- ✓ 14. Blue binder entitled "Vertac, Inc. Product Specification Sheets" - (S. V. Kulkarni).
- ✓ 15. Binder entitled "Vertac Toxaphene 90, an Insecticidal Toxicant" - (S. V. Kulkarni).
16. Copies of Inventory Schedules as of 8/1/80 for each of 4 plants - (J. Hanna).
- ✓ 17. Copies of Custom Processing (Tolling) Fact Sheet (Schedule C and A) as of 7/25/80, marked "Confidential."

- 18. Copies of Sales and Gross Margin Schedules for 1979 and 1980, by plant, by product, by month - (J. Hanna).
- 19. 1981 Sales Forecast - (J. Hanna).
- ✓ 20. Vertac Financial Statement - June 30, 1980 - (J. Hanna).

B. MATERIAL FURNISHED TO MR. PELTZMAN AND MR. BOISDE

- 1. Monochloroacetic Acid:
 - a. Major Project Proposal - (L. Hacrow).
 - b. General Process Description - 10 MM Lbs./Year - Potential Licensee - (T. Bridger).
 - c. Simplified Process Flow Diagram - 97% - (T. Bridger).
 - d. Simplified Process Flow Diagram - 99% - (T. Bridger).
 - e. Set of PID's - 24 MM Lbs./Year Plant - (T. Bridger).
 - f. Set of PFD's with Material Balance - (T. Bridger).
 - g. Equipment Layout for MCA at Vicksburg - Methyl Parathion Plant - (T. Bridger).
 - h. Equipment List for 24 MM Lbs./Year Plant - (T. Bridger).
- 2. Simplified Process Flow Diagram - 2,4-D - (T. Bridger).
- 3. Copy of Agreement with Gulf Re: Gulf's plant on Vicksburg site) - (Bumpers).
- 4. Unit Cost Report:
 - a. Vicksburg - 6/30/80 and 12/31/79.
 - b. W. Helena - 6/30/80.
- 5. OSHA Report of Inspections dated 6/29/76 and 10/27/78 for Vicksburg - (M. Hawkes).
- 6. Employee Benefit Programs - Summary letter and supporting detail - (J. Goryance).
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9. Product Specification Sheets - All Products - (R. Guidi).
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 - b. NPDES Permits - Vicksburg and West Helena
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27. Plant Property Survey - Vicksburg and West Helena.
28. Overall Plot Plan - Plant - Vicksburg and West Helena.
29. List of offsites, utilities, major buildings, rail facilities, waste treatment, etc. - Vicksburg and West Helena.
30. P & ID's for Propanil, BSC, Atrazine, Toxaphene, Dinitro, Parathion, KNO₃/CL₂.
31. Plot plan and equipment list for all units - Vicksburg and West Helena.
32. Vicksburg - Description of Property Improvements; Market Data - Industrial Land Sales; Cost Approach to Value; Reconciliation and Final value Estimate; Cost New of Property for Insurance of Special Purpose Improvements.
33. West Helena - Improvements; Inventory and Unit Equipment Summary; Description of Improvements; Market Data - Land Sales; Cost Approach to Value; Reconciliation and Final Value Estimate; Cost New of Improvements for Insurance.
34. Vertac - Raw Material Usage and Conversion Costs Comparisons 1979 and 1980 Year-to-date.

(Items #32, #33, and #34 were mailed to S. Peltzman on August 22, 1980.)

35. Technical Department Organization Chart.
36. Resumes of Senior Technical Personnel.
37. Basic Employment Data of Same.
38. Authorization for Expenditure #239 pertaining to segregation of non-contaminated water at Vicksburg.

(Items #35, #36, #37, and #38 were mailed to Dr. Paul Boisdé on August 28, 1980.)

39. Employee - Listing
40. Product Sales Data (KNO₃, Chlorine, Toxaphene, Dinitro, Propanil).
41. Product Cost Data (Benzene Sulfonyl Chloride and Propanil Technical Information.)

(Items #39, #40, and #41 were mailed to S. Peltzman on August 29, 1980.)

9/2/80

Not Returned = ✓
" " = 0

INFORMATION FURNISHED TO RHONE-POULENC, INC.

A. MATERIAL FURNISHED TO MR. W. CLAPPER AS OF AUGUST 14, 1980:

- x 1. Copy of UC Investment Proposal No. 77-1 of 7/21/77.
- ✓ 2. General Information - Vertac Custom Manufacturing - (F. B. Lane).
- ✓ 3. Copy of SRI International preliminary draft of revised draft of Chemical Economics Handbook - (S. V. Kulkarni).
- ✓ 4. Copies of organization charts of 4 plants as of 8/12/80, as well as Employee Staffing Summary as of 8/12/80.
- ✓ 5. Listing of Vertac Registrations - 2 copies.
- ✓ 6. List of Supplemental Registrations updated 1/30/78 - (S. V. Kulkarni); as well as listing compiled 12/1/77 - (S. V. Kulkarni) - 2 copies.
- ✓ 7. Copy of letter directed to S. V. Kulkarni by A. T. Malone concerning FIFRA Data Compensation Claims dated 5/16/80.
- ✓ 8. Blue binder containing listing of 1979 State Label Registrations - 2 copies.
- ✓ 9. White binder entitled "1979-1980 Sales Comparison by Account and Assignment."
- x 10. Copy of Dinitro Sales Analysis 1979-1980; 2,4-D Analysis; Comparative Actual Sales Prices KNO₃.
- x 11. Copy of Memo from S. V. Kulkarni directed to G. T. Manley concerning potential market for 2,4-D.
- ✓ 12. Computer printout report "Sales by Product by Customer" as of 6/30/80.
- ✓ 13. Photocopy of P/W Audited Statement for December 31, 1979, together with copy of P/W letter to Shareholders and Board.
- ✓ 14. Blue binder entitled "Vertac, Inc. Product Specification Sheets" - (S. V. Kulkarni).
- ✓ 15. Binder entitled "Vertac Toxaphene 90, an Insecticidal Toxicant" - (S. V. Kulkarni).
- 16. Copies of Inventory Schedules as of 8/1/80 for each of 4 plants - (J. Hanna).
- ✓ 17. Copies of Custom Processing (Tolling) Fact Sheet (Schedule C and A) as of 7/25/80, marked "Confidential."

ADEQ0017660

✓ 18. Copies of Sales and Gross Margin Schedules for 1979 and 1980, by plant, by product, by month - (J. Hanna).

X 19. 1981 Sales Forecast - (J. Hanna).

✓ 20. Vertac Financial Statement - June 30, 1980 - (J. Hanna).

2 copies rec'd

B. MATERIAL FURNISHED TO MR. PELTZMAN AND MR. BOISDE

✓ 1. Monochloroacetic Acid:

✓ a. Major Project Proposal - (L. Hacro).

✓ b. General Process Description - 10 MM Lbs./Year - Potential Licensee - (T. Bridger).

✓ c. Simplified Process Flow Diagram - 97% - (T. Bridger).

✓ d. Simplified Process Flow Diagram - 99% - (T. Bridger).

✓ e. Set of PID's - 24 MM Lbs./Year Plant - (T. Bridger).

✓ f. Set of PFD's with Material Balance - (T. Bridger).

✓ g. Equipment Layout for MCA at Vicksburg - Methyl Parathion Plant - (T. Bridger).

✓ h. Equipment List for 24 MM Lbs./Year Plant - (T. Bridger).

X (2) Simplified Process Flow Diagram - 2,4-D - (T. Bridger).

✓ 3. Copy of Agreement with Gulf Re: Gulf's plant on Vicksburg site) - (Bumpers).

✓ 4. Unit Cost Report:

✓ a. Vicksburg - 6/30/80 and 12/31/79.

✓ b. W. Helena - 6/30/80.

✓ 5. OSHA Report of Inspections dated 6/29/76 and 10/27/78 for Vicksburg - (M. Hawkes).

✓ 6. Employee Benefit Programs - Summary letter and supporting detail - (J. Goryance).

✓ 7. ~~Copy of Chart of Accounts~~ - (L. Hacro).

✓ 8. Employee Listing - Vicksburg - Showing name, address, social security number, sex, etc. (no salary information) - (D. Walker). - *also, W. Helena*

- ✓9. Product Specification Sheets - All Products - (R. Guidi).
- ✓10. Process Technology - Existing and Proposed Products (Booklet prepared by Tech Center) - (R. Guidi).
- ✓11. Custom Manufacturing - (G. Mather). Gave samples of:
 - ✓a. Secrecy Agreement
 - ✓b. Letter of Intent
 - ✓c. Contract
- ✓12. Capital Expenditure Summary (\$12.6 MM) Proposed 1981 - (E. A. Munoz).
- + (13.) Manufacturing Cost Estimates - (L. Harcrow) - Atrazine 4-L; MCA-97% and 99%; Methyl Parathion; 2,4-DCA; 2,4-D Acid via Water Process; 2,4-DCP via Sulfuryl Chloride; DNOC.
- ✓14. Product Manufacturing Cost - Vicksburg - All Products - Actual 1979 and YTD 1980.
- ✓15. Insurance Coverages - Type, Cost, etc. - (J. Bumpers).
- ✓16. KNO₃ Selling Prices - Letter dated 7/1/80 - (N. Morgan).
- ✓17. Property Tax Assessment - 1979 - Vicksburg - (D. Walker).
- ✓18. Income Statement - 6/30/80 - Vicksburg - (D. Walker).
- ✓19. Capital Appropriation Policy - (L. Harcrow).
- ✓20. Capital Expenditure Status Report - 6/30/80 - (J. Hanna).
- ✓21. Methyl Parathion Explosion Report - (M. Hawkes).
- ✓22. Nitric Acid Plant Study - Prepared by B. McAvoy - (R. Guidi).
- + (23.) KNO₃ Manufacturing Cost Net of CL₂ - (L. Harcrow).
- ✓24. Executive Payroll - Total Dollars only - (J. Bumpers).
- ✓25. Asset Ledger - Vicksburg and West Helena.
- ✓26. Environmental Data - (D. Karkkainen).
 - ✓a. Summary Note
 - ✓b. NPDES Permits - Vicksburg and West Helena
 - ✓c. Air Emission Survey - Vicksburg

- ✓ 27. Plant Property Survey - Vicksburg and West Helena.
- ✓ 28. Overall Plot Plan - Plant - Vicksburg and West Helena.
- ✓ 29. List of offsites, utilities, major buildings, rail facilities, waste treatment, etc. - Vicksburg and West Helena.
- ✓ 30. P & ID's for Propanil, BSC, Atrazine, Toxaphene, Dinitro, Parathion, KNO₃/CL₂.
- ✓ 31. Plot plan and equipment list for all units - Vicksburg and West Helena.
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- ✓ 40. Product Sales Data (KNO₃, Chlorine, Toxaphene, Dinitro, Propanil).
- ✓ 41. Product Cost Data (Benzene Sulfonyl Chloride and Propanil Technical Information.)

(Items #39, #40, and #41 were mailed to S. Peltzman on August 29, 1980.)



INTERNAL CORRESPONDENCE

DATE: July 16, 1981

TO: C. P. Bomar, Jr.

FROM: L. E. Harcrow

CC:

SUBJECT: Rhone-Poulenc, Inc.

Information was given to Rhone-Poulenc to aid in their acquisition study of Vertac.

All of the information was returned except the circled items on the attached list dated September 2, 1980.

We could ask again for the return of these items, but they could have made copies.

Please advise.

L E Harcrow

LEH:ew_m

Attachment

TRANSMITTAL MEMO

FROM

C. P. BOMAR, JR.

TO *JD* DATE *7/20/81*

- | | |
|--|--|
| <input type="checkbox"/> For your information | <input type="checkbox"/> Please reply and copy me |
| <input type="checkbox"/> Your comments, please | <input type="checkbox"/> Review and reply to _____ |
| <input type="checkbox"/> Review and call me | <input type="checkbox"/> Review and forward to _____ |
| <input type="checkbox"/> Review and file | <input type="checkbox"/> Attach previous correspondence and return to me |
| <input type="checkbox"/> Review and return to me | |

COMMENTS/REPLY

L E Harcrow

JD



INTERNAL CORRESPONDENCE

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CC:

SUBJECT: Rhone-Poulenc, Inc.

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We could ask again for the return of these items, but they could have made copies.

Please advise.

LEH:ew *ew*

Attachment

ADEQ0017651

RHÔNE-POULENC INC.

P.O. Box 2009 - 120 Jersey Avenue - New Brunswick, New Jersey 08903 - Telephone: (201) 846-7700

February 20, 1981

E/1.064

Mr. John J. O'Neill
Vertac Chemical Corporation
24th Floor
5100 Poplar
Memphis, Tennessee 38137

Dear Mr. O'Neill:

Enclosed please find all of the documents which I have in my possession concerning your corporation. I understand that Dr. Paul M. Boisdé will be mailing the documents which he has and Mr. William Clapper has already shipped to your attention his items.

Kindly review the enclosures and let me know if everything is in order.

Thank you.

Sincerely,



S. Peltzman
Manager -
Project Services & Planning

SP:JP

Enclosures

cc: D.S.Blackford

RHÔNE-POULENC INC.

RECEIVED
FEB 23 1981

P.O. Box 2009 - 120 Jersey Avenue - New Brunswick, New Jersey 08903 - Telephones: (201) 846-7700

February 19, 1981

E/1.060

Mr. John J. O'Neill
Vertac Chemical Corporation
24th Floor
5100 Poplar
Memphis, Tennessee 38137

Dear Mr. O'Neill:

Thank you for your letter of February 10, 1981. We are currently coordinating the transmittal of the documents you requested and expect to have them mailed to you by end of this week.

Sincerely,



S. Peltzman
Manager -
Project Services & Planning

SP:JP

cc: D.S. Blackford

6/9/81

Linno,

✓ items were returned
0 " " not "

PJA

Also, see JJO letter
dated 2/10/81 (attached) to
Mr. Clapper.

AL CORPORATION
Memphis, TN 38137 • 901-767-6851

TELEX 53927

May 10, 1981

ming

7 08903

Information listed in the
plied to you and Mr. Boide
acquisition study of Vertac.

Your prompt return of all of this material is
requested.

Sincerely,

J. J. O'Neill
John J. O'Neill

JJO'N:ap

Attachment

See: C1/Ba. nax ✓
X C Ba. nax

ADEQ0017651



VERTAC CHEMICAL CORPORATION

24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

TELEX 53927

February 10, 1981

Mr. Stephen A. Peltzman
Manager
Project Services and Planning
Rhone-Poulenc Inc.
120 Jersey Avenue
New Brunswick, New Jersey 08903

Dear Mr. Peltzman:

Our records show that the information listed in the attached exhibit was supplied to you and Mr. Boide in connection with your acquisition study of Vertac.

Your prompt return of all of this material is requested.

Sincerely,

J. J. O'Neill
John J. O'Neill

JJO'N:ap

Attachment

See: C/PB. nat' ✓
J. E. H. H. H. H. H.

ADEQ0017651

MATERIAL FURNISHED TO MR. PELTZMAN AND MR. BOISDE

- ✓ 1. Monochloroacetic Acid:
 - ✓ a. Major Project Proposal - (L. Hacrow).
 - ✓ b. General Process Description - 10 MM Lbs./Year - Potential Licensee - (T. Bridger).
 - ✓ c. Simplified Process Flow Diagram - 97% - (T. Bridger).
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 - ✓ e. Set of PID's - 24 MM Lbs./Year Plant - (T. Bridger).
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 - ✓ g. Equipment Layout for MCA at Vicksburg - Methyl Parathion Plant - (T. Bridger).
 - ✓ h. Equipment List for 24 MM Lbs./Year Plant - (T. Bridger).
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 - ✓ a. Vicksburg - 6/30/80 and 12/31/79.
 - ✓ b. W. Helena - 6/30/80.
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- ✓ 6. Employee Benefit Programs - Summary letter and supporting detail - (J. Goryance).
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- ✓ 22. Nitric Acid Plant Study - Prepared by B. McAvoy - (R. Guidi).
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 - ✓ a. Summary Note
 - ✓ b. NPDES Permits - Vicksburg and West Helena
 - ✓ c. Air Emission Survey - Vicksburg



VERTAC CHEMICAL CORPORATION

24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

TELEX 53927

February 10, 1981

Mr. William Clapper
Group Product Manager
Agrochemical Division
Rhone-Poulenc Inc.
P. O. Box 125
Monmouth Junction, New Jersey 08852

Dear Mr. Clapper:

Our records show that in addition to the material which you returned on January 5, 1981, the following information had been furnished to you:

- ☐ Copy of UC Investment Proposal No. 77-1 of 7/21/77.
- ☒ Listing of Vertac Registrations (2 copies).
- ☒ List of Supplemental Registrations updated 1/30/78 - (S. V. Kulkarni); as well as listing compiled 12/1/77 - (S. V. Kulkarni) (2 copies) - Only one copy was returned.
- ☐ Copy of letter directed to S. V. Kulkarni by A. T. Malone concerning FIFRA Data Compensation Claims dated 5/16/80.
- ☒ Blue binder containing list of 1979 State Label Registrations (2 copies) - Only one copy was returned.
- ☐ Copy of Dinitro Sales Analysis 1979-1980; 2,4-D Analysis; Comparative Actual Sales Prices KNO₃.
- ☐ Copy of Memo from S. V. Kulkarni directed to G. T. Manley concerning potential market for 2,4-D.
- ☐ Copies of Inventory Schedules as of 8/1/80 for each of four plants (J. Hanna).
- ☒ Copies of Sales and Gross Margin Schedules for 1979 and 1980, by plant, by product, by month (J. Hanna).
- ☐ 1981 Sales Forecast (J. Hanna).

We would appreciate the prompt return to us of the above-listed items.

Sincerely yours,

John D. O'Neill
John D. O'Neill

JJO'N:ap

ACC. CPBama
L'E. Harsaw

ADEQ0017651



rhône-poulenc inc.

P.O. BOX 125 • MONMOUTH JUNCTION, N.J. 08852 • TELEPHONE: 201-297-0100 • TELEX 84-4527

January 5, 1981
Ref. No. WMC/81/001

Mr. John J. O'Neill
Vice Chairman
Vertac Chemical Corporation
24th Floor
5100 Poplar Avenue
Memphis, TN 38137

Dear Mr. O'Neill:

Enclosed please find all the information loaned to us
from your file.

Thank you for giving us an opportunity to get to know
you and your company.

Very truly yours,

RHONE-POULENC CHEMICAL COMPANY

William M. Clapper
William M. Clapper
Group Product Manager
Agrochemical Division

WMC:ngc

ADEQ0017651

ADEQ0018353

EXHIBIT E-1

RHONE-POULENC INC.
AGROCHEMICAL DIVISION

2,4-DB SALES HISTORY

	<u>1980</u> <u>SALES</u>	<u>1981</u> <u>SALES</u>	<u>1982</u> <u>SALES</u>
<u>BUTOXONE</u>			
R-P Label	74,259	76,912	73,242g
Average Selling Price	\$9.04	\$8.26	\$7.64
Private Label	92,844	80,120	78,444g
Average Selling Price	\$8.28	\$7.51	\$6.82
TOTAL BUTOXONE	167,103g	157,032	151,686g
<u>BUTOXONE ESTER</u>			
R-P Label	18,693	19,598	17,079g
Average Selling Price	\$12.33	\$12.39	\$12.41
<u>BUTOXONE AMINE</u>			
R-P Label	--	3,132	7,556g
Average Selling Price	--	\$8.49	\$7.66
Private Label	7,848	6,480	9,612g
Average Selling Price	\$9.61	\$8.50	\$7.35
TOTAL BUTOXONE AMINE	7,848	9,612	17,168g
TOTAL LBS. AI	360,685	347,726	348,053

DJU: 3/15/83

ADEQ0018353

EXHIBIT E-1OPEN ORDERS AS OF 3/14/832,4-DB

	<u>QUANTITY</u>	<u>SHIP DATE</u>
<u>BUTOXONE:</u>		
<u>R-P Label</u>		
MD Agchem Inc.	324	March 31
NC Chowan Ag Products	1,512	March 31
NC W. S. Clark & Sons	<u>2,052</u>	March 31
	<u>3,888</u>	

BUTOXONE ESTER:

CA Calarco Inc.	20	March 14
WA Farmers Union Central Exchange	342	March 10
ID Puregro Company	720	March 15
WA Soil Crop Inc.	<u>180</u>	March 10
	<u>1,262</u>	

2,4-DB ACID:

Uniroyal	<u>16,000 lbs.</u>	Release through December 31, 1983
	<u>16,000</u>	

EXHIBIT E-1

BUTOXONE AMINE

<u>CUSTOMER</u>	1981 Y-T-D <u>SALES</u>	1982 Y-T-D <u>SALES</u>	<u>VARIANCE</u>
Terra Chem. Int'l. Inc.	---	5,184	5,184
Valley Chemical Company	<u>3,132</u>	<u>2,372</u>	<u>(760)</u>
PRODUCT TOTAL	<u>3,132</u>	<u>7,556</u>	<u>4,424</u>

BUTOXONE AMINE PRIVATE LABEL

<u>CUSTOMER</u>	1981 Y-T-D <u>SALES</u>	1982 Y-T-D <u>SALES</u>	<u>VARIANCE</u>
Terra Chem. Int'l Inc.	1,296	1,620	324
Voluntary Purchasing Groups	<u>5,184</u>	<u>7,992</u>	<u>2,802</u>
PRODUCT TOTAL	<u>6,480</u>	<u>9,612</u>	<u>3,132</u>

BUTOXONE ESTER

<u>CUSTOMER</u>	1981 Y-T-D <u>SALES</u>	1982 Y-T-D <u>SALES</u>	<u>VARIANCE</u>
Agricultural Products Co.	270	900	630
Arizona Agrochemical Corp.	---	180	180
B. F. Chemical Company	180	---	(180)
Bakersfield Ag Chem.	---	165	165
Balcom Chemical Company	360	---	(360)
Barber-Rowland Company	---	180	180
Bingham Cooperative Inc.	67	---	(67)
Britz Chemical Co. Inc.	180	180	---
Calarco Inc.	4,678	4,020	(658)
Cam Chemical Company	15	---	(15)
Chemtec, Inc.	510	---	(510)
Farmers Union Central Exchange	864	1,585	721
FMC Corporation	300	---	(300)
Helena Chemical Company	577	844	267

Continued...

EXHIBIT E-1

BUTOXONE ESTER
(continued)

<u>CUSTOMER</u>	1981 Y-T-D <u>SALES</u>	1982 Y-T-D <u>SALES</u>	<u>VARIANCE</u>
Interlink Ag Chemicals Inc.	700	—	(700)
Lovelock Seed Company	540	1,620	1,080
Mid-Cal Farms Inc.	310	—	(310)
Occidental Chemical Company	345	180	(165)
Pacoast Chemical Company	470	1,070	600
Professional Farm Service	—	110	110
Puregro Company	360	720	360
Puregro Company	360	360	—
Quincy Farm Chemicals	216	—	(216)
Simplot Soilbuilders	360	—	(360)
Soil & Crop Inc.	—	540	540
John Taylor Fertilizers Co.	710	900	190
Tri-State Chemicals Inc.	732	285	(447)
Tri River Chemical	1,050	—	(1,050)
Umapine Chemical Applicators	180	—	(180)
United Agri Products	1,080	1,080	—
Union Chemical Division	720	—	(720)
United Agri Products - Hawaii	10	—	10
USS Agri-Chemicals	524	—	(524)
Valley Warehouse Company	—	26	26
Van Waters & Rogers	—	60	60
Walla Walla Farmers Coop.	—	360	360
Westchem Agricultural Chem.	180	360	180
Wilbur Ellis Co.	2,450	1,204	(1,246)
Western Farm Service Inc.	—	150	150
Western Seed & Supply Inc.	300	—	(300)
 PRODUCT TOTAL	 <u>19,598</u>	 <u>17,079</u>	 <u>(2,519)</u>

BUTOXONE PRIVATE LABEL

<u>CUSTOMER</u>	1981 Y-T-D <u>SALES</u>	1982 Y-T-D <u>SALES</u>	<u>VARIANCE</u>
Chem Nut Inc.	12,312	12,312	—
Dune Co.	320	—	(320)
Gold Kist Inc.	16,020	—	(16,020)
Helena Chemical Company	2,052	4,104	2,052
Red Panther Chemical Company	26,124	32,832	6,708
Terra Chem. Int'l Inc.	8,424	21,816	13,392
USS Agri Chemicals	14,868	7,380	(7,488)
 PRODUCT TOTAL	 <u>80,120</u>	 <u>78,444</u>	 <u>(1,676)</u>

Continued...

ADEQ0018353

EXHIBIT E-1

BUTOXONE

<u>CUSTOMER</u>	<u>1981 Y-T-D SALES</u>	<u>1982 Y-T-D SALES</u>	<u>VARIANCE</u>
Agchem Inc.	576	576	—
Agchem Service Inc.	1,008	980	(28)
Agricultural Products Co.	180	—	(180)
Alexandria Seed Co.	—	1,296	1,296
Barber-Rowland Company	180	—	(180)
Bel Chemical & Supply Co. Inc.	108	324	216
Bertola Farm Supply	216	108	(108)
Blackwell Seed & Chemical	—	108	108
Cardinal Chemical	2,592	1,208	(1,384)
Carolina Eastern Chem. Co. Inc.	—	460	460
Central Chemical Corp.	—	180	180
Chemtec, Inc.	605	—	(605)
Chowan Ag Products	2,052	2,124	72
Cleveland Chemical Co.	4,316	—	(4,316)
W. S. Clark & Sons	1,728	1,764	36
Coastal Chemical Company	970	—	(970)
Cotton States Chemical-	—	4,104	4,104
Crescent Chemical Co.	4,212	3,780	(432)
Culpepper Farmers Coop.	216	216	—
Delta Purchasing Federation	—	1,080	1,080
Dotson and Son	1,188	—	(1,188)
Dune Co.	2,975	3,780	805
Estech General Chemicals Corp.	972	—	(972)
Farmers Supply Co-Op	648	736	108
Farmers Union Central Exchange	972	—	(972)
FCX Inc.	108	—	(108)
FMC Corporation	1,620	610	(1,010)
Georgia Ag Chemicals	432	1,200	768
Gold Kist Inc.	—	4,860	4,860
Helena Chemical Company	17,409	6,879	(10,530)
Interlink Ag Chemicals Inc.	180	—	(180)
January Company	24	—	(24)
Kaiser Aluminum & Chemical Corp.	1,512	1,728	216
Land 'O Lakes Inc.	—	720	720
MFC Services	—	1,505	1,504
Midland Cooperatives Inc.	612	—	(612)
Old Fox Agri. Sales Inc.	108	—	(108)
Pacoast Chemical Company	—	215	215
Pennfield Corp.	864	180	(684)
Puregro Company	1,195	2,088	893
Puregro Company	360	—	(360)
Rangens Inc.	—	180	180
Rosen Livestock	1,152	—	(1,152)
Royster Company	—	432	432
Simcal Soilbuilders	55	—	(55)
Sim Cal Soil Builders	—	180	180

Continued...

BUTOXONE
(continued)

<u>CUSTOMER</u>	1981 <u>Y-T-D</u> <u>SALES</u>	1982 <u>Y-T-D</u> <u>SALES</u>	<u>VARIANCE</u>
Smith-Douglas Inc.	324	—	(324)
Soil & Crop Inc.	180	505	325
Soilserv Inc.	140	—	(140)
Southern Agricultural Chem.	504	—	(504)
Southern Farmers Assoc.	3,564	3,564	—
John Taylor Fertilizers Co.	936	180	(756)
Taylor Stuckey Inc.	—	2,808	2,808
Tide Products Inc.	1,512	2,556	1,044
Tidewater Agricorp. Inc.	—	324	324
Triangle Chemicals	756	4,212	3,456
United Agri Products	—	540	540
Union Chemical Division	180	—	(180)
USS Agri Chemicals	1,908	1,080	(828)
Van Waters & Rogers	—	180	180
Walla Walls Farmers Coop.	—	180	180
Warne Chemical & Equipment	—	540	540
West Central Chemical	216	756	540
Westchem Agricultural Chem.	360	—	(360)
Western Farm Service	360	360	—
Wilbur Ellis Company	315	180	(135)
Wilbur Ellis Company	360	1,440	1,080
Wilbur Ellis Company	—	360	360
Western Farm Service Inc.	20	1,605	1,585
Woolfolk Chemical Works	10,908	4,968	(5,940)
Warterfield Grain Co.	3,024	2,168	(856)
Wyatt & Crews	—	756	756
 PRODUCT TOTAL	 <u>76,912</u>	 <u>73,242</u>	 <u>(3,670)</u>

BILL OF SALE

Rhone-Poulenc Inc., a New York corporation, in consideration of the sum of Ten Dollars (\$10.00) and other valuable consideration, receipt of which is hereby acknowledged, and pursuant to that certain Agreement (the "Agreement") dated *January 1*, 1983 between Rhone-Poulenc Inc. ("RP") and Vertac Chemical Corporation ("Vertac"), a Delaware corporation, RP does hereby sell, assign, transfer, convey and deliver to Vertac the following described property:

1. The EPA and state pesticide registrations for all of RP's technical products and end-use formulations containing the active ingredient 2,4-DB or the salts or esters thereof (hereinafter collectively the "Products"), such registrations being identified or described in Exhibit A attached to the Agreement, together with all of RP's files concerning the registrations.
2. All scientific data, including toxicity, efficacy and other data developed by or for RP for the purpose of supporting the registrations, including but not limited to such data heretofore submitted to EPA or any other governmental agency in the United States, as more particularly described in Exhibit B attached to the Agreement, together with all rights heretofore or hereafter accrued or accruing in connection therewith.
3. The United States trademarks "Butoxone SB" and "Butoxone", Registration Nos. 784,227 and 784,229 respectively, identified in Exhibit C of the Agreement, together with the goodwill and contract rights associated therewith.

4. All confidential statements of formula, formulation recipes, manufacturing procedures, analytical specifications and methods, safety information and all manuals and related documents associated with the manufacture, formulation and packaging of Products.
5. All research and engineering files, summaries and reports relating to the manufacture and uses of 2,4-DB, including but not limited to the information identified in Exhibit D of the Agreement.
6. A current list of RP's customers for the Products including the volumes purchased by each such customer, and all related customer files, for each of the calendar years 1980, 1981 and 1982 and for the current year to date.
7. All of RP's inventories of end-use Products in bulk and packaged in containers and labeled under EPA Registrations Nos. 359-677, 359-358, 359-409 and 359-502, and all inventories of 2,4-DB and isooctyl ester and butyl ester of 2,4-DB as shall be on hand as of Closing, as identified in E-~~1~~^{RHV} of the Agreement.

This Bill of Sale is being executed and delivered by Rhone-Poulenc Inc. pursuant to the provisions of the Agreement.

RP hereby represents and warrants to Vertac that it has and does hereby convey good and marketable title to all of the property

conveyed hereunder, free and clear of all pledges, liens, claims, encumbrances, security interests or mortgages whatsoever, except for such matters, if any, as are expressly referred to in or permitted by the Agreement.

IN WITNESS WHEREOF, RP has caused this Bill of Sale to be duly executed by its duly authorized officers and its corporate seal to be hereunto affixed as of *March 21*, 1983.

RHONE-POULENC INC.

By: *Robert M. Verbrug*
President

(Corporate Seal)

ATTEST:

Vincent D. O'Neil
Secretary

ASSIGNMENT

WHEREAS, Rhone-Poulenc Inc. ("Assignor"), a New York corporation having offices at Monmouth Junction, New Jersey, owner of the trademarks set forth in the attached Schedule A, is transferring by purchase to Vertac Chemical Corporation ("Assignee"), a Delaware corporation having offices at 5100 Poplar Avenue, Memphis, Tennessee, Assignor's business and goodwill connected with and symbolized by said marks in the United States.

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, Assignor, by these presents, does sell, assign and transfer unto Assignee the entire right, title and interest of Assignor in and to the said marks in the United States, together with the goodwill of the business connected with and symbolized by the said marks, the registrations for said marks in the United States set forth in the attached Schedule A, and any and all contractual rights involving the said marks.

IN WITNESS WHEREOF, Rhone-Poulenc Inc. has caused this Assignment to be executed in its behalf by its duly authorized officer this 21st day of March, 1983.

RHONE-POULENC INC.

By:

Robert M. Verburg
President

STATE OF NEW JERSEY:

: ss.

COUNTY OF MIDDLESEX:

Before me, a Notary Public in and for said State and County, duly commissioned and qualified, personally appeared Robert M. Verburg, with whom I am personally acquainted and who, upon oath, acknowledged himself to be the President of Rhone-Poulenc Inc., the within named bargainor, a corporation, and that he, as such President, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as such President.

WITNESS my hand and Notarial Seal at office this 21st day of March, 1983.

Deborah Sherwen

DEBORAH SHERWEN
A Notary Public of New Jersey
My Commission Expires 1-9-84

ADEQ0018342

SCHEDULE A

Trademark

U.S. Registration No.

BUTOXONE SB

784,227

BUTOXONE

784,229



VERTAC CHEMICAL CORPORATION

24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

TELEX 53927

March 23, 1983

Process Coordination Branch (3)
Registration Division (TS-767c)
Office of Pesticide Programs
Environmental Protection Agency
Crystal Mall Bldg. 2 Room 1120
Jefferson Davis Highway
Arlington, VA 22202

Attention: Ms Lela Sykes

Subject: Transfer of Registrations - Rhone-Poulenc, Inc.
to Vertac Chemical Corporation

Dear Ms. Sykes:

Enclosed please find a letter of transfer dated March 16, 1983 from John E. Davies, Senior Vice-President of Rhone-Poulenc, Inc., requesting transfer of the seven pesticide registrations identified therein to Vertac Chemical Corporation.

Please expedite transfer of these seven registrations to Vertac Chemical Corporation and advise us of the new registration numbers assigned as soon as possible.

Sincerely,

VERTAC CHEMICAL CORPORATION

J. R. Fisher
Manager of Technical Services

JRF:dh

STATE OF TENNESSEE
COUNTY OF SHELBY

Before me, a Notary Public in and for said State and County, duly commissioned and qualified, personally appeared J. R. Fisher, with whom I am personally acquainted and who, upon oath, acknowledged himself to be the Manager of Technical Services of Vertac Chemical Corporation, the within named bargainor, a corporation, and that he, as such Manager of Technical Services, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as Manager of Technical Services.

Witness my hand and notarial seal this 23rd day of March, 1983.

Notary Public

My Commission Expires 12-31-84

ADEQ0018350

RHÔNE-POULENC INC.

P.O. Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone: (201) 297-0100 - Telex: 844482, 844527

March 16, 1983

Mr. Lela Sykes
Process Coordination Branch (TS-767C)
Registration Division
Office of Pesticide Programs
Environmental Protection Agency
Crystal Mall Bldg. 2 Room 1120
Jefferson Davis Highway
Arlington, VA 22202

Dear Mrs. Sykes:

Rhone-Poulenc Inc., Agrochemical Division located at P.O. Box 125, Monmouth Junction, New Jersey, 08852 hereby transfers and assigns to Vertac Chemical Corporation located at 5100 Poplar Avenue, Memphis, Tennessee, 38187 all rights, titles and interest, if any, in and to the following labels. Vertac Chemical Corporation has accepted the transfer.

EPA Reg. No.	359-358	Butoxone Amine Herbicide
	359-409	Butoxone Ester
	359-502	Butoxone SB Herbicide
	359-677	Butoxone Herbicide
	359-583	Rhodia 2,4-DB Isooctyl Ester Technical
	359-589	Rhodia 2,4-DB Acid Technical
	359-668	Rhodia 2,4-DB Butyl Ester Technical

This letter authorizes the transfer of the trademark Butoxone® to Vertac Chemical Corporation but does not authorize the transfer of the trademark Rhodia® to Vertac Chemical Corporation.

This transfer is brought about by the sale of the above labels with the following agreement:

Rhone-Poulenc Inc., Agrochemical Division, P.O. Box 125, Monmouth Junction, New Jersey, 08852 for the sum of \$1.00 and other good and valuable considerations; hereby sells the above labels to Vertac Chemical Corporation, 5100 Poplar Avenue, Memphis, Tennessee, 38187.



ADEQ0018350

Mrs. Lela Sykes

-2-

March 16, 1983

Please send all label and registration correspondence on the above labels to the new owner.

Sincerely,

RHONE-POULENC INC.
Agrochemical Division

John E. Davies
John E. Davies
Senior Vice-President
General Manager

Subscribed to and sworn before me a
Notary Public this 18th day of March, 1983

DEBORAH SHERWEN
A Notary Public of New Jersey

Deborah Sherwen My Commission Expires 1-9-84

AGREES TO THE PURCHASE

VERTAC CHEMICAL CORPORATION

C. P. Bomar, Jr.
C. Patrick Bomar Jr.

Subscribed to and sworn before me a
Notary Public this 13 day of March, 1983

John F. Lawrence
My Commission Expires 12-8-85

State of Tennessee
County Shelby

ADEQ0018350

LAW OFFICES
APPERSON, CRUMP, DUZANE & MAXWELL

26TH FLOOR

100 NORTH MAIN BUILDING
MEMPHIS, TENNESSEE 38103
901/525-1711

EAST OFFICE

SUITE 100
5554 FORBES AVENUE
MEMPHIS, TENNESSEE 38125
901/767-8195

CHARLES W. METCALF, 1940-1994
WILLIAM R. METCALF, 1978-1994

JOHN W. APPERSON
CHARLES METCALF CRUMP
JERRE G. DUZANE
JOHN S. MAXWELL, JR.
ALLEN T. MALONE
SAMUEL RUBENSTEIN
GEORGE W. GRIDER
PHILIP G. KAMINSKY
ROBERT L. GINKELSRIEL
MICHAEL E. HEWOLEY

CATHERINE H. SKEFOS
STEVEN B. JOHNSON

JOHN MART TODD
OF COUNSEL

March 29, 1983

C
O
P
Y
The Commissioner
Patent and Trademarks Office
Attn: Assignment Branch
Washington, D.C. 20231

Re: Assignment of Trademarks Butoxone® and Butoxone SR®
from Rhone-Poulenc, Inc. to Vertac Chemical Corporation

Dear Sir:

Enclosed for recordation is an Assignment of the referenced trademarks, U.S. registration nos. 784,227 and 784,229, respectively, from Rhone-Poulenc, Inc. to Vertac Chemical Corporation. Also enclosed is our check in the sum of \$20.00 to cover the recording fee.

Upon recordation, please see that the enclosed Assignment document is returned to me.

Sincerely yours,

Allen T. Malone

ATM/bw

Enclosures

ADEQ0018402



VERTAC CHEMICAL CORPORATION

24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

TELEX 53927

March 23, 1983

Mr. Robert M. Verburg
President
Rhone-Poulenc Inc.
P. O. Box 125
Black Horse Lane
Monmouth Junction, New Jersey 08852

Dear Bob:

It was a pleasure meeting with you on Monday for the closing of our Butoxone acquisition. Your staff did an excellent job in finalizing this transaction and preparing the necessary documents for closing. We are excited about the acquisition which I hope will prove to be profitable for Vertac and Rhone-Poulenc for many years.

As we discussed, we are looking for additional acquisitions such as this and will appreciate hearing from you if you become aware of similar opportunities in the future.

Likewise, we are always looking for opportunities to utilize the wealth of custom manufacturing facilities at our three plant sites. I am enclosing a copy of our Vertac brochure which briefly outlines our experience in this area. Ron Cheves is preparing more up-to-date information which he will forward in the near future.

Again, it was a pleasure working with you and your associates, and I hope that we will have additional opportunities to work on projects of mutual interest in the future.

Sincerely yours,

C. P. Bomar, Jr.
President

CPB:ap

Enclosure

cc: Mr. John E. Davies
Mr. Vincent DeFelice
Mr. Ron Cheves

ADEQ0018402



VERTAC CHEMICAL CORPORATION

24th Floor • 5100 Poplar • Memphis, TN 38137 • 901-767-6851

TELEX 53927

November 17, 1982

Mr. John E. Davies
Senior Vice President-
General Manager
Agrochemical Division
Rhone-Poulenc Inc.
Black Horse Lane
P. O. Box 125
Monmouth Junction, New Jersey 08852

Dear Jack:

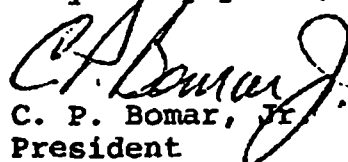
Enclosed is an executed copy of your November 15, 1982, Secrecy Agreement covering BUTOXONE. By returning this agreement, I am indicating Vertac's desire to review the information described in your letter pursuant to making a proposal for the acquisition of Rhone-Poulenc's 2,4-DB related assets. Since I will be out of the country for a period of time, please forward this information to R. A. Guidi, our Vice President of Operations. He will begin evaluating the information, and I will review his comments immediately upon my return.

As we discussed, should such an acquisition be desirable to Vertac, it would be in our mutual interest to finalize this matter as early as possible. Accordingly, it will be my intent to give you a preliminary response and hopefully enter into serious negotiations by mid-December.

If you have specific individuals to whom you would like us to address our technical and/or marketing questions, please indicate this to Ray Guidi.

We appreciate your prompt action on this matter and look forward to discussing it with you further in the near future.

Very truly yours,


C. P. Bomar, Jr.
President

CPB:ap

Enclosure

cc: Mr. R. A. Guidi
Vice President-Operations
Mr. W. C. Keese
Vice President-Agricultural Chemicals

ADEQ0018402



INTERNAL CORRESPONDENCE

DATE: November 3, 1982

CONFIDENTIAL

TO: Rhone-Poulenc File

FROM: C. P. Bomar, Jr.

CC: W. C. Keese

SUBJECT: 2,4-D Ester Exchange -
2,4-DB Acquisition

Per my conversation of October 29, 1982, with Jack Davies,
the following should be noted:

(b) (4)



CPB:ap

CPB

ADEQ0018402

RHÔNE-POULENC INC.
AGROCHEMICAL DIVISION

PO Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone: (201) 297-0100 - Telex: 844527

May 16, 1983
MAM/83/139

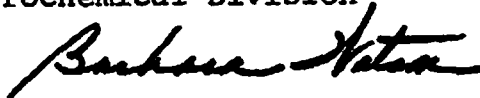
Mr. C. P. Bomar Jr.
Vertac Chemical Corp.
5100 Poplar Avenue, Clark Towers
24th Floor, Suite 2414
Memphis, Tennessee 39837

Dear Mr. Bomar:

Enclosed is some additional 2,4-DB correspondence that was inadvertently forgotten to be shipped to you.

Sincerely,

RHONE-POULENC INC.
Agrochemical Division



Barbara Watson, Secretary to
Margaret A. McMullen
Registration Specialist

MAM/BJW

Enclosures included the following:

Draft copy of Petition Proposing a Tolerance for 2,4-DB for
use in Oat Production.

Manila file labeled "IR-4 2,4-DB on Radishes."

The above turned over to Mr. Fisher as received.
ap 5-26-83



ADEQ0018394

Carton addressed to Mr. Bomar was received from Rhone-Poulenc on April 23, 1983, containing the following files:

1. 2,4-DB Complaints
2. 2,4-DB Data Call-In
3. 2,4-DB EPA Correspondence
4. 2,4-DB Clover (IR-4)
5. 2,4-DB Fish & Wildlife
6. 2,4-DB Methodology
7. 2,4-DB Performance
8. 2,4-DB Product Chemistry
9. 2,4-DB Residue Chemistry
10. 2,4-DB Toxicology
11. 2,4-DB Mint (IR-4) Submission
12. 2,4-DB Pasture Grasses (IR-4)
13. 2,4-DB Acid Tech (Labels)
14. 2,4-DB Butyl Ester Tech (Labels)
15. 2,4-DB Isooctyl Tech (Labels)
16. Butoxones (All) - Petition information from product files
17. Butoxone (Labels)
18. Butoxone Amine (Labels)
19. Butoxone Ester (Labels)
20. Butoxone SB (Labels)

All files were turned over to J. R. Fisher as received.

ap



5-20-83

RHÔNE-POULENC INC.
AGROCHEMICAL DIVISION

P.O. Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone: (201) 297-0100 - Telex: 844527

May 3, 1983
SJH/83/052

Mr. C. P. Bomar Jr.
Vertac Chemical Corp.
5100 Poplar Avenue, Clark Towers
24th Floor, Suite 2414
Memphis, Tennessee 39837

Dear Mr. Bomar:

Enclosed please find two copies of each of the final reports listed below. These are the reports for the studies which Ms. Margaret A. McMullen had promised would be sent to you.

- * WIL - 21002, 21003, 21004, 21005 Acute Oral, Dermal, Eye and Primary Skin with Butoxone.
- * WIL - 21006, 21007, 21008, 21009 Acute Oral, Dermal, Eye and Primary Skin with Butoxone Ester.

Sincerely,

RHONE-POULENC INC.
Agrochemical Division

Suzanne J. Hamburger
Suzanne J. Hamburger, Ph.D.
Hazard Evaluation Scientist

SJH/bjw
enclosures

*Wil Research Laboratories, Inc.

All copies turned over to J. R. Fisher as received. *MA* 26 MAY 83
5-26-83 ap



ADEQ0018394

Carton addressed to Mr. Bomar was received from Rhone-Poulenc on April 23, 1983, containing the following notebooks:

1. Petition for the Establishment of Tolerances for the Pesticide Chemical 4-(2,4-Dichlorophenoxy) butyric acid on Raw Agricultural Commodities. (Rhodia Inc.) - 2,4-DB Pesticide Petition No. 1F1089
 - A. Book I - Sections A, B, and part of C
 - B. Book II - End of Section C
 - C. Book III - Section D
 - D. Book IV - Sections E, F, and G
2. Substantive Amendment - Pesticide Petition No. 1F1089
3. Efficacy Data Addendum - Pesticide Petition No. 1F1089 (2,4-DB on Peanuts)
4. 2,4-DB Petition Rough Draft
5. FDA Correspondence and USDA Correspondence - 2,4-DB Pesticide Petition No. 1F1089
6. Summary of Program to Clear the Use of 2,4-DB on Alfalfa and Certain Other Small Seeded Legumes & Peas Grown for Food & Fodder & To Market Same in the USA (May 23, 1961).
7. Proposal to obtain data necessary for the establishment of a negligible residue petition on alfalfa and soybeans for 4-(2,4-dichlorophenoxy)-butyric acid (10-28-68).
8. Butoxone - EPA Reg. No. 359-677, June 19, 1978 - Results of N-Nitroso Contaminant Analysis (Rhodia Inc.)
9. Efficacy Data for Peanuts and Soybeans (2 copies)
 - Butoxone Amine - USDA Reg. No. 359-358
 - Butoxone Ester - USDA Reg. No. 349-409
 - Butoxone SB - USDA Reg. No. 359-502
10. Additional Support Data for Weed Control and Peanut Tolerance with Butyrac 175 (Amchem Products, Inc., April 19, 1973).

All files were turned over to J. R. Fisher as received.

ap



24 MAY 83

No. 870638

RECEIPT FOR CERTIFIED MAIL—30¢ (plus postage)

SENT TO Attn: Lela Sykes		POSTMARK OR DATE
Process Coordination Branch(3)		
Registration Division (TS-767c)		
Office of Pesticide Programs		
Environmental Protection Agency		
Crystal Mail Bldg. #2, Rm 1120		22202 3-23-83
Jefferson Davis Hwy., Arlington, VA		
OPTIONAL SERVICES FOR ADDITIONAL FEES		
RETURN RECEIPT SERVICES	1. Shows to whom and date delivered 15¢ With restricted delivery 65¢ 2. Shows to whom, date and where delivered .. 35¢ With restricted delivery 85¢	
RESTRICTED DELIVERY 50¢		
SPECIAL DELIVERY (extra fee required)		

PS Form
Aug. 1975 3800

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL

(See other side)

☆ GPO: 1975-O-691-452

ADEQ0018347



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAY 23 1983

*The original of
this letter is
located in the
Regist Lib: EPA
Registration Division*

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

RECEIVED

MAY 27 1983

VERTAC CHE

Mr. J. R. Fisher
Vertac Chemical Corp.
5100 Poplar
24th Floor
Memphis, TN 38137

Gentlemen:

Subject: Transfer of Registrations from
Company Number 359 to 39511

Pursuant to your request in your letter of March 23, 1983 and Rhone Poulenc Inc.'s letter of March 16, 1983 we are transferring the following registrations from Rhone Poulenc Inc. P.O. Box 125 Monmouth Junction, NJ 08852 company number 359 to Vertac Chemical Corp. 5100 Poplar, Memphis, TN 38137 company number 39511.

The effective date of these changes is May 18, 1983.

<u>Registered Products</u>	<u>Old EPA Reg. No.</u>	<u>New EPA Reg. No.</u>
Butoxone Amine Herbicide	359#358	39511#117
Butoxone Ester	359#409	39511#118
Butoxone SB Herbicide	359#502	39511#119
2,4-DB Isooctyl Ester Technical	359#583	39511#120
2,4-DB Acid Technical	359#589	39511#121
Butoxone Herbicide	359#677	39511#122
2,4-DB Butyl Ester Technical	359#668	39511#123

On the basis of information furnished, the above named products are hereby registered under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended (FIFRA). The effective date of issuance of the New EPA Reg. No. is May 18, 1983. You should indicate the new company designation and new EPA Reg. No. on the label at the next printing. It will not be necessary to submit labeling for review if the only changes are in the company designation and the EPA Reg. No.

Changes in labeling or formula differing in substance from that Accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U. S. EPA Registration Number.

ADEQ0018347

If you plan to change your source of supply for the active ingredients in your product, please notify this Agency by sending us a revised Confidential Statement of Formula. This statement must include among other items, the name and address of the new supplier and the EPA Registration Number for the new source.

Registration is in no way to be construed as an endorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with FIFRA.

By copy of this letter we are also informing Rhone Poulenc Inc. of these changes.

Sincerely,



Art Donner, Section Head
Registration Support and
Emergency Response Branch

cc: Rhone Poulenc Inc.

RHÔNE-POULENC INC.
AGROCHEMICAL DIVISION

P.O. Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone: (201) 297-0100 - Telex: 844527

September 26, 1983

*→ JRF
Please handle
LH*

Mr. P. Bowmar, President
Vertac Chemical Corp.
5100 Poplar
24th floor
Memphis, TN 38137

Dear Mr. Bowmar:

For your information and use I have enclosed a list of the states where we have had the 2,4-DB (Butoxone) products registered for 1983.

Since you purchased our inventory may I suggest you register the 359-xxx, Rhone-Poulenc Inc. products as discontinued for the 1984 registration year. I registered the products as discontinued for the June registrations (July 1, 1983 thru June 30, 1984); these states indicated by 'J' on the list.

If you have any questions, please call me at the above number.

Sincerely,

Lynette Waldron
(Mrs.) Lynette Waldron
Senior Registrar

Enclosure

cc: D. Umani
P. McMullen



ADEQ0018400

The 2,4-DB (Butoxone) products were registered in the following states for 1983 by Rhone-Poulenc. Vertac should register as Disc. 1st yr in 1984 to cover sale of 1983 yr.

STATE	Butoxone Amine (359-358)	Butoxone Ester (359-409)	Butoxone SB (359-502)	Butoxone (359-677)					STATE	Butoxone Amine (359-358)	Butoxone Ester (359-409)	Butoxone SB (359-502)	Butoxone (359-677)				
ALABAMA	D/2			✓					NEBRASKA		✓		✓				
ARIZONA		✓		✓					NEVADA		✓		✓				
ARKANSAS	✓			✓					NEW HAMPSHIRE		✓		✓				
CALIFORNIA		✓		✓					NEW JERSEY		✓		✓				
COLORADO		✓		✓					NEW MEXICO	✓	✓		✓				
CONNECTICUT		✓		✓					NEW YORK		✓		✓				
3 DELAWARE		D/1		D/1					NORTH CAROLINA	✓			✓				
FLORIDA	D/2			✓					NORTH DAKOTA		✓		✓				
GEORGIA	D/2			✓					OHIO		✓		✓				
GUAM	—	—	—	—					OKLAHOMA	✓	✓		✓				
HAWAII	—	—	—	—					OREGON		✓		✓				
IDAHO		✓		✓					PENNSYLVANIA		✓		✓				
ILLINOIS		✓		✓					PUERTO RICO	—	—	—	—				
INDIANA		✓		✓					RHODE ISLAND		✓		✓				
IOWA		✓		✓					SOUTH CAROLINA	D/2			✓				
KANSAS		✓		✓					3 SOUTH DAKOTA				D/1				
KENTUCKY		✓		✓					3 TENNESSEE	D/1			D/1				
LOUISIANA	✓			✓					3 TEXAS	✓	✓		✓				
MAINE	—	—	—	—					3 UTAH	—	D/1		D/1				
MARYLAND		✓		✓					VERMONT		✓		✓				
3 MASSACHUSETTS		D/1		D/1					VIRGINIA	✓	✓		✓				
3 MICHIGAN	—	—	—	—					WASHINGTON		✓		✓				
MINNESOTA		✓		✓					WEST VIRGINIA		✓		✓				
MISSISSIPPI	✓			✓					WISCONSIN		✓		✓				
MISSOURI		✓		✓					WYOMING		✓		✓				
MONTANA		✓		✓					Destroy of Columbia	—	—	—	—				

✓ = renewed '83

D/1 or D/2 = Discontinued
1st or 2nd yr '83

— = not registered

I = '83 registrati
by R-P
ADEQ0018400

(Contract file)

RHÔNE-POULENC INC.

P.O. Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone: (201) 297-0100 - Telex: 844482, 844527

November 2, 1983

Mr. C. P. Bomar, Jr.
VERTAC CHEMICAL CORPORATION
24th Floor
5100 Poplar
Memphis, TN 38137

Dear Mr. Bomar:

In connection with the agreement entered into between Vertac Chemical Corporation and Rhone-Poulenc effective as of January 1, 1983, and more specifically Article III - 3.1 of the Agreement, this letter is to inform you that Rhone-Poulenc Inc. sold its St. Joseph, Missouri plant on November 1, 1983.

Sincerely,

RHONE-POULENC INC.



Vincent E. DeFelice
Senior Vice President
General Counsel

VED:das

*Copy to Mr. Melasini
11-4-83*

ah

*copy also in Contract file -
R/P concerning possible sale to
Trust of St. Joseph Plant*



ADEQ0018251

John Miles

snackery
Jodis
Pace
Porter
Robbins
Satterfield

CEDAR INTERNAL CORRESPONDENCE

August 19, 1986

TO: R. Cheves

FROM: G. L. Pratt

CC: Frank Barry

SUBJECT: July Custom
Manufacturing Report

ICI

Permethrin

Production (lbs. 100% Permethrin equivalent)

	<u>July</u>	<u>YTD</u>
Permethrin	19,066	540,879
Cypermethrin	299,982	1,915,162
Acid Chloride	16,876	135,214
	<u>335,924</u>	<u>2,591,255</u>

Shipments (lbs. as is)

Ending Inventory (lbs. as is)

18,360	Permethrin	110,100
249,115	Cypermethrin	78,500
-0-	Acid Chloride	36,300

Billing

	<u>July</u>	<u>YTD</u>
Base Fee	\$106,539	
Operating Fee (335,924 lbs. X \$0.35)	117,573	
Miscellaneous	8,039	
	<u>\$232,151</u>	\$1,700,050

368,738 gallons of waste shipped to Gibraltar, 14,946 gallons to Cecos, Odessa, Texas.

Targeted Revenue: \$2,273 in 1986 for 9 month operation.

AB0000080881

Diphenylcarbamyl Chloride

ICI testing of product from the March trial production run is continuing. First results are imminent.

Action: Continue to monitor ICI tests.

Targeted Revenue: \$150M/Year for less than a month's operation.

Copolymerization

ICI is continuing their analysis of moving some Haloflex production from the U.K. with July as the decision month. Sol Peltz asked Cedar to refine our ballpark estimate of \$175M/month plus or minus \$25M for revenue. The refinement would zero in on 2 - 3 campaigns per year at 600M lb./month, a minimum of 3MM lbs./year for 3 years, and consider the capital amortization for raw material storage, and support equipment for the 3,500 gallon reactor in the DRA unit.

Action: respond to request for refined ballpark estimate.

Targeted Revenue: \$6-900M/year for 3 - 6 month operation.

Lonza

Dale Battin was unable to confirm Lonza's continuing interest in a Unihib project with Cedar. Lonza has reorganized Dale's group and the new management needs at least 60 days to re-evaluate the project. The internal delay we experienced in establishing Vertac/Cedar's interest in the project continues to be costly.

Action: 1. Stay in contact with Dale
2. If Lonza's decision is positive move quickly to set up contact parameters.

Targeted Revenue: \$850M - 1,000M/year for 6-12 month operation.

Alkylation/Chloromethylation

Action: Awaiting secrecy agreement from Lonza.

Targeted Revenue: \$300M/year for 2 month operation.

SCI

The current campaign was completed on July 30 with 501,019 lbs. of Isonox 132 being produced. Total revenue is \$313,137. The modest profit of \$7,600 was as expected based on the need to reprocess the recycle material from SCI and the improvements that have had to be made in the process.

On August 14 the campaign results were discussed with SCI at a meeting in Schenectady. The yield of 85% on PSBP was better than they expected and the low purge rates were well received. However, our IBE useage of 33% over theoretical is twice the overage they consider acceptable. Due to lack of manpower and break-even economics, SCI has not aggressively pursued the development of the Isonox 132 market. Demand for 1987 will be 500,000 lbs. for use mainly in polyols and a small use in PVC. We are to submit a quotation for 1987 to include Cedar taking responsibility for raw material consumption.

Action: Prepare 1987 quote

Targeted Revenue: \$300M in 1986, \$300M in 1987.

Arco

The quats project continues on hold pending resolution of PMN questions.

Action: Continue to monitor Arco progress. Trial batch planned for Ricerca.

Targeted Revenue: \$200M - 1000M/year in first 3 years.

Rhone Poulenc

The campaign for MTPO began on August 8. The first 3 batches meet the 98% product specification and production rate will permit completion of the 33 metric tons of MTPO by mid September. By blending, we should reduce the off specification material from the previous campaign to 5,235 lbs. which may have to be sent to waste disposal.

Action: Monitor production

Targeted Revenue: \$700M in 1986.

Mobil

Project A

The sulfurized diisobutylene project is continuing under development at Mobil, our projected economics having met their criteria.

Action: Periodically check Mobil's progress toward late 1986 commercial scale production trial.

Targeted Revenue: \$120M - 1800M/year over 3+ year contract.

M & T

In a meeting with M & T it was determined that the current custom producer of the antimony/toluene product must give up his plant site by year end, but may relocate. We have offered the potential for improved economics, growth in output, and greater flexibility in scheduling. M & T is evaluating their options with particular regard to any continuing obligation with their current supplier.

Action: Await evaluation of options by M & T.

Targeted Revenue: \$750M+/year.

Pfizer

Our written expression of interest in and equipment availability for Pfizer's project was satisfactory. The three intermediates will require 20 major reactor vessels and 2 centrifuge/dryer systems.

Action: Pfizer will contact us in first quarter 1987.

Dead Sea Bromine

We are awaiting data on a 2MM lb./year bromination process which may provide a base for U.S. production of Dead Sea Bromine products.

Action: Periodic followup.

Air Products

A proposal for project A was submitted during the week of July 28. It was determined that the product is already being made by

another custom manufacturer who had raised his toll fee to 40 cents/lb. which is within our proposal range. We have withdrawn our proposal for the project, as a protest against Air Products' lack of honesty. The possibility of Cedar obtaining the contract under favorable economic terms was unlikely anyway.

Action: Continue to pursue project B which is at the bench scale with a view to participation in scaleup.

Targeted Revenue: Unknown

Hercules

On July 11 we presented a 4 year proposal for Metton production from 3 - 10 MM lbs./year, total revenue of \$780M and a capital investment (borne by Cedar) of \$500M. The proposal was well received and we were asked to consider economics for a 2, and 4 year proposal with higher production rates and with Hercules prepaying the capital. These economics were given verbally to Hercules on July 17. Hercules has estimated \$5MM as the cost of their own 15MM lb./year plant and an ultimate operating cost of 15 cents/lb. Metton.

Action: Await Hercules response to the revised proposal.

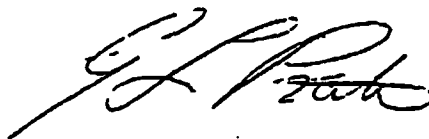
Targeted Revenue:	1987	-	\$ 840M
	1988	-	1760
	1989	-	2000
	1990	-	2280

Pennwalt

A proposal to produce di(2-ethylhexyl) tetrabromophthalate was submitted verbally during the week of July 28. Requirements are 1.5MM lb. in 1987 commencing in the first quarter rising to 12MM lbs./year by 1989. A plant visit by Joe Bohen is scheduled for the week of August 25 to discuss the technology in detail.

Action: Firm proposal by week of September 8.

Targeted Revenue: \$500M/year rising to \$2.5MM/year.



GLP/nm

RHÔNE-POULENC INC.

P.O. Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

*John
Clay
Roh*

August 22, 1986

Mr. C. Parker
Cedar Chemical Corp.
Highway 242 South
W. Helena, AR 72390

Dear Charlie:

Enclosed are the following orders, forms, etc. to be used in conjunction with the production of RP 15 and RP 10 at your plant.

1. Copy of letter to G. Pratt, Memphis.
2. Copy of P.O. B6-78582 (original to G. Pratt).
3. Receiving Report sets and Blanket Order Release Forms for raw material orders booked thus far. In each case I have released 1 tank truck for delivery the week of September 8, 1986. Thereafter, you are responsible for releasing the rest of the material on a timely basis for production, with the following exceptions:

3,4-DCBTF I will be issuing additional orders
Meta Cresol for the balance of material required.
Some will be for imported material. As soon as delivery dates are available, you will be notified so you can schedule domestic shipments around the import containers as they have to be returned to the pier promptly.

Also, I am stock transferring 22 drums, 10,030 lbs. of DCBTF from Mt. Pleasant, TN.

DMAC After the 1st tank truck of virgin material, we will supply a car of mixed product, the analysis of which is:

DMAC	86.4%	66,727 lbs.
m-Cresol	1.7%	1,313 lbs.
RP 15	2.4%	1,853 lbs.
DCBTF	2.2%	1,700 LBS.
water	5.0%	N/A

When this material is needed, please advise me, and I will arrange for the stock transfer.



ADEQ0021190


As far as making releases on the KOH, I would appreciate it if you would try to alternate back and forth between the 2 sources.

4. Reporting Procedure: This is our standard procedure with contract manufacturers that details how the different receiving reports, production reports, etc. are to be prepared, as well as the applicable mailing addresses.

Please bear in mind that none of my suppliers are aware of who my other sources are, the total quantities purchased, what per cent of the business they or anyone else has, etc. I will depend on you to see to it that no one at Cedar will divulge any such information. All inquiries beyond shipping data are to be referred to me.

Very truly yours,

RHONE POULENC, INC.



E. Schroder
Purchasing Agent

ES/sg

c/c: G. Pratt Memphis, TN

P.S. Also enclosed are specifications and MSDS for the raw materials.

RHÔNE-POULENC INC.

P.O. Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone: (201) 297-0100 - Teleg: 844527

August 25, 1986

Mr. Geoffrey L. Pratt
Cedar Chemical Corp.
5100 Poplar
Suite 2414
Memphis, TN 38137

Dear Geof:

Enclosed is our Purchase Order No. B6-78582 which covers the 2 production stages, RP 15 scheduled to start up between September 15 and October 1, 1986 and RP 10 scheduled to start up between January 1-15, 1987.

The following data is being sent direct to Charlie Parker in W. Helena, AR.

1. Copy of above order.
2. Receiving Report sets for raw materials currently on order. Additional orders will be issued shortly.
3. Reporting Procedure and forms.

Please let me know if there are any questions regarding the above.

Very truly yours,

RHONE POULENC, INC.



E. Schroder
Purchasing Agent

ES/sg

c/c: C. Parker, W. Helena, AR ✓

CC: John Miles
Mark Robbins
Tom Luthis
Chag Dale



ADEQ0017606

DIVISION CORP. ADMIN.CEDAR CHEMICAL CO.
5100 Poplar
TO Suite 2414
Memphis, TN. 38137CONFIRMING
TO: Geoffrey L. Pratt ON

DATE REQUIRED AT DESTINATION			SHIP VIA		ROUTE		MARKS TO APPEAR ON ALL INVOICES, CONTAINERS AND SHIPPING DOCUMENTS		TERMS	
AS RELEASED			TO BE ADVISED				P.O. #86-78582		5	
PPD	COLL	ADD	ALLOWED		F.O.B.					
	X				W. HELENA, AR.					
ITEM	QTY ORDERED	PRODUCT CODE OR PROJECT NO.		DESCRIPTION			UNIT PRICE	TOTAL COST		
1	684,000 lbs.	9-5391-00		RP-15-START UP between 9/15-10/1/86.				\$435,000.00		
	140,000 lbs.						\$.35/lb.	49,000.00		
	Approx. 115,000 lbs.			Estimated 11.5 days Prorated @ \$175,000/mo Estimated				67,567.00		
	940,000			Coordinate shipments with Don Bertling, Freeport, TX. (409-233-7871)						
2	500,000 lbs.	9-5394-00		RP-10				550,000.00		
	Approx. 100,000 lbs.						\$.35/lb.	35,000.00		
		SHIP TO		TO BE ADVISED						
01		2468		19125						

- PLEASE ACKNOWLEDGE ALL ORDERS
- INVOICE IN DUPLICATE
- THIS PURCHASE ORDER IS SUBJECT TO THE TERMS AND CONDITIONS AND INSTRUCTIONS APPEARING ON THE FACE AND REVERSE SIDE HEREOF.

1 of 2

BY E. Schröder **RHÔNE-POULENC INC.**
PURCHASING AGENT

RA 39 9/84

VENDOR'S COPY

ADEQ0017606

ADEQ0017606

RHÔNE-POULENC INC.

P.O. Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone: (201) 297-0100 - Telex: 844527

August 25, 1986

Mr. Geoffrey L. Pratt
Cedar Chemical Corp.
5100 Poplar
Suite 2414
Memphis, TN 38137

Dear Geof:

Enclosed is our Purchase Order No. B6-78582 which covers the 2 production stages, RP 15 scheduled to start up between September 15 and October 1, 1986 and RP 10 scheduled to start up between January 1-15, 1987.

The following data is being sent direct to Charlie Parker in W. Helena, AR.

1. Copy of above order.
2. Receiving Report sets for raw materials currently on order. Additional orders will be issued shortly.
3. Reporting Procedure and forms.

Please let me know if there are any questions regarding the above.

Very truly yours,

RHONE POULENC, INC.



E. Schroder
Purchasing Agent

ES/sg
c/c: C. Parker, W. Helena, AR ✓

CC: John Miles
Mark Robbins
Tom Luchio
Clay Pace



ADEQ0021202

RHÔNE-POULENC

DIVISION

CORP. ADMIN.

TO CEDAR CHEMICAL CO.
5100 Poplar
Suite 2414
Memphis, TN. 38137

**CONFIRMING
TO:** _____

Geoffrey L. Pratt ON

DATE REQUIRED AT DESTINATION			SHIP VIA		ROUTE		MARKS TO APPEAR ON ALL INVOICES CONTAINERS AND SHIPPING DOCUMENTS			TERMS		
AS RELEASED			TO BE ADVISED				P.O.#B6-78582			<div style="border: 1px solid black; padding: 2px; display: inline-block;">5</div> <div style="display: inline-block; vertical-align: top; font-size: 0.8em;"> 1 1/2% 10 DAYS 2 1% 10 DAYS 3 2% 10 DAYS 4 NET 10 DAYS 5 NET 30 DAYS 6 OTHER (SPECIFY BELOW) </div>		
PPD	COLL	ADD	ALLOWED		F O B.							
	X				W.HELENA,AR.							
ITEM	QTY ORDERED		PRODUCT CODE OR PROJECT NO		DESCRIPTION			UNIT PRICE		TOTAL COST		
1	684,000 lbs.		9-5391-00		RP-15-START UP between 9/15-10/1/86.					\$435,000.00		
	140,000 lbs.							\$.35/lb.		49,000.00		
	Approx. 116,000 lbs.				Estimated 11.6 days Prorated @ \$175,000/mo Estimated					67,667.00		
	940,000				Coordinate shipments with Don Bertling, Freeport, TX. (409-233-7871)							
2	600,000 lbs.		9-5394-00		RP-10					550,000.00		
	Approx. 100,000 lbs.							\$.35/lb.		35,000.00		
					SHIP TO: TO BE ADVISED							
01					2468		19125					

- 1 of 2
- **PLEASE ACKNOWLEDGE ALL ORDERS**
 - **INVOICE IN DUPLICATE**
 - **THIS PURCHASE ORDER IS SUBJECT TO THE TERMS AND CONDITIONS AND INSTRUCTIONS APPEARING ON THE FACE AND REVERSE SIDE HEREOF.**

BY I.E. Schroder **RHONE-POULENC INC.**
PURCHASING AGENT

RA 39 9/84

VENDOR'S COPY

ADE00021202

ADE00021202

RHÔNE-POULENC INC.

P O Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone (201) 297-0100 FAX 844527

John Joel Hug
Clay Tom

September 5, 1986

Mr. Charlie Parker
Cedar Chemical Corp.
Highway 242 South
W. Helena, AR 72390

Dear Charlie:

With regard to the current campaign to produce RP-15, attached are receiving reports for the 2 orders issued thus far for Meta Cresol. It is anticipated a 3rd order will be issued shortly to cover the balance of the requirement.

Very truly yours,

RHONE POULENC, INC.

E. Schroder

E. Schroder
Purchasing Agent

ES/sg

E. S. S.

ADEQ0017609

Order To R.P. Cedar Chemical Corp., West Helena, AR.	Building	Room	Regulation AS
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DIVISION

COMP. ADMIN.

TO **LCP Chemicals & Plastics Inc.
Baritan Plaza II
Baritan Center
Edison, N.J. 08837**

PURCHASE ORDER

<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	DATE 2/21/86	PO NUMBER 78581
SEE BELOW		SEE BELOW	
1. FREEPORT, TX. 77841 - 6213 HWY. 332 E. 2. ROCHESTER, N.Y. 14613 - 1000 DRIVING PARK AVE. 3. LAKEWOOD, N.J. 08701 - 1669 CORPORATE RD. WEST 4. NEW BRUNSWICK, N.J. 08903 - 298 JERSEY AVE. 5. NEWTON, N.J. 07800 - 10 PATERSON AVE. 6. PORTLAND, OR. 97210 - 8200 N.W. ST. HELENS RD. 7. MT. PLEASANT, TN. 38474 - ARROW MINES ROAD 8. MONMOUTH JUNCTION, N.J. 08852 - BLACK HORSE LANE 9. NEW YORK, N.Y. 10017 - 52 VANDERBILT AVE. 10. NEW BRUNSWICK, N.J. 08903 - 120 JERSEY AVE. 11. WILLIAMSTOWN, MA. 01267 - 330 COLE AVE. 12. MONMOUTH JUNCTION, N.J. 08852 P.O. BOX 125 13. NEW BRUNSWICK, N.J. 08903 P.O. BOX 2009 14. SEE BELOW 15.			

CONFIRMING TO:

Victor Edwards

ON 2/18/86

DATE REQUIRED AT DESTINATION	SHIP VIA	ROUTE	MARKS TO APPEAR ON ALL INVOICES, CONTAINERS AND SHIPPING DOCUMENTS	TERMS
AS RELEASED	TANK TRUCKS		P.O. 784-78581 Release No.	<input checked="" type="checkbox"/> 1 1/2% 10 DAYS <input type="checkbox"/> 1% 10 DAYS <input type="checkbox"/> 2% 10 DAYS <input type="checkbox"/> NET 10 DAYS <input type="checkbox"/> NET 30 DAYS <input type="checkbox"/> OTHER (SPECIFY BELOW)
PPF	COLL	ADD	ALLOWED	
	X			

S.P. freight equalized with MUSCLE SHOALS, AL.

ITEM	QTY ORDERED	PRODUCT CODE OR PRODUCT NO.	DESCRIPTION
1	Approx. 250,000 lbs.	9-1190-00	CAUSTIC POTASH 45% LIQUID
<p>Releases to be made by Charlie Parker, Cedar Chem. Corp (501-572-3701) LCP Customer Service (800-492-5087) NOTE: Tank trucks are to be equipped with 2 sections of 11and hoses and are to be pressurized or have pump CERTIFICATES OF ANALYSIS required on all shipments. Send to Attn. Quality Control Mgr. at receiving location SHIP TO: Rhône-Poulenc Inc. 3 Cedar Chemical Corp. Highway 242 South West Helena, AR. 72390</p>			
<p>FREIGHT/BILLS TO BE SENT TO: Rhône-Poulenc Inc. P.O. Box 125 Monmouth Junction, N.J. 08852 Attn: Traffic Dept.</p>			

01	2460	19811							

Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Slp.	Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Slp.

Deliver To R.P.S. CEDAR CHEM. CORP. N. HELENA, AR.	Building	Room	Requisitioner AS
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DIVISION COOP. ADMIN.

CHATELAIN INDUSTRIES INC.
2701 Channel Avenue
TO Memphis, TN. 38113

DATE ORDERED		INVOICE NO.	DATE	NUMBER
<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO		8/21/86	86-78578
BILLS TO		SHIP TO		
SEE BELOW		SEE BELOW		
1. FREEPORT, TX. 77541 - 6213 HWY. 332 E. 2. ROCHESTER, N.Y. 14613 - 1000 DRIVING PARK AVE. 3. LAKEWOOD, N.J. 08701 - 1669 CORPORATE RD. WEST 4. NEW BRUNSWICK, N.J. 08903 - 288 JERSEY AVE. 5. NEWTON, N.J. 07800 - 10 PATERSON AVE. 6. PORTLAND, OR. 97210 - 6200 N.W. ST. HELENS RD. 7. MT. PLEASANT, TN. 38474 - ARROW MINES ROAD 8. MONMOUTH JUNCTION, N.J. 08852 - BLACK HORSE LANE 9. NEW YORK, N.Y. 10017 - 82 VANDERBILT AVE. 10. NEW BRUNSWICK, N.J. 08903 - 120 JERSEY AVE. 11. WILLIAMSTOWN, MA. 01267 - 330 COLE AVE. 12. MONMOUTH JUNCTION, N.J. 08852 P.O. BOX 125 13. NEW BRUNSWICK, N.J. 08903 P.O. BOX 2009 14. SEE BELOW 15.				

CONFIRMING TO: **H. Ray Jones** ON **8/21/86**

DATE REQUIRED AT DESTINATION	SHIP VIA	ROUTE	MARKS TO APPEAR ON ALL INVOICES, CONTAINERS AND SHIPPING DOCUMENTS	TERMS
AS RELEASED	TANK TRUCK		P.O. 86-78578	<input checked="" type="checkbox"/> 1/10 DAYS
PPG	COLL	ADD	Release No.	<input type="checkbox"/> 15/10 DAYS
X	ALLOWED	F.O.B.		<input type="checkbox"/> 25/10 DAYS
		S.P. Freight equal with		<input type="checkbox"/> NET 30 DAYS
		MUSCLE SHOALS, AL.		<input type="checkbox"/> OTHER

ITEM	QTY. ORDERED	PRODUCT CODE OR PROJECT NO.	DESCRIPTION
1	Approx. 250,000 lbs.	9-1190-00	CAUSTIC POTASH 45% LIQUID
			1st shipment to arrive week of 9/8/86.
			All further releases to be made by Charlie Parker, Cedar Chemical Corp. (501-572-3701) Chemtech Customer Service 801-775-2100
			NOTE: Tank trucks are to be equipped with 2 sections of lined hoses and are to be pressurized or have pumps.
			CERTIFICATES OF ANALYSIS: required on all shipments. Send to AEC Quality Control Mgr. at receiving location.
			FREIGHT BILLS TO BE SENT TO:
			Rhone-Poulenc Inc.
			P.O. Box 125
			Monmouth Junction, N.J. 08852
			Attn: Traffic Dept.

01	2400	10011			

Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Slg.	Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Slg.



OMISION

CONF. AMIN.

P.O. Box 344

TO Niagara Falls, N.Y. 14002

NAME		ADDRESS		DATE	NUMBER
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO				8/21/86	86-78580
<div style="border: 1px solid black; padding: 2px;"> SEARCHED INDEXED SERIALIZED FILED </div>		SEE BELOW <small>THIS CASE ORIGINALLY WAS APPLIED ON ALL BUREAU FILES WHICH WERE AND WERE NOT RECORDED. LIST TALLIES AND OTHER DETAILS TO ACCORD TO BUREAU PRACTICES.</small>			
B I L L T O	S H I P T O	1. FREEPORT, TX. 77541 - 6213 HWY. 332 E.			
		2. ROCHESTER, N.Y. 14613 - 1000 DRIVING PARK AVE.			
		3. LAKEWOOD, N.J. 08701 - 1669 CORPORATE RD. WEST			
		4. NEW BRUNSWICK, N.J. 08903 - 298 JERSEY AVE.			
		5. NEWTON, N.J. 07800 - 10 PATERSON AVE.			
		6. PORTLAND, OR. 97210 - 6200 N.W. ST. HELENS RD.			
		7. MT. PLEASANT, TN. 38474 - ARROW MINES ROAD			
		8. MONMOUTH JUNCTION, N.J. 08852 - BLACK HORSE LANE			
		9. NEW YORK, N.Y. 10017 - 52 VANDERBILT AVE.			
		10. NEW BRUNSWICK, N.J. 08903 - 120 JERSEY AVE.			
		11. WILLIAMSTOWN, MA. 01267 - 330 COLE AVE.			
		12. MONMOUTH JUNCTION, N.J. 08852 P.O. BOX 125			
		13. NEW BRUNSWICK, N.J. 08903 P.O. BOX 2009			
		14. SEE BELOW			
		15.			

**CONFIRMING
TO:**

Open Schwabach ON

DATE REQUIRED AT DESTINATION			SHIP VIA		ROUTE		AGENTS TO APPEAR ON ALL INVOICES CONTAINERS AND SHIPPING DOCUMENTS		TERMS	
SEE BELOW			TANK TRUCK		Miller Transporters (800-648-5378) Chemical Leasing (518-436-7631)				<div style="border: 1px solid black; padding: 5px; display: inline-block;">5</div> <ul style="list-style-type: none"> 1 1/2% 10 DAYS 2 1% 10 DAYS 3 2% 10 DAYS 4 NET 10 DAYS 5 NET 30 DAYS 6 OTHER (SPECIFY BELOW) 	
PPD	COLL	ADD	ALLOWED		P.D.S.		P.O.#6-76880 Release No.			
	X				NIAGARA FALLS N.Y.					

ITEM	QTY. ORDERED	PRODUCT CODE OR PROJECT NO.	DESCRIPTION
1	Approx. 500,000 lbs.	9-1292-00	2,4-DICHLOROPHENOXYPHENYL FLUORIDE 99% Min.
			First shipment to arrive west of 9/8/66.
			All other releases to be made by Charlie Parker, Cedar Chemical Corp. (501-572-3701) Occidental Customer Service Dep. Dunn Schinschack (800-820-1144)
			NOTE: All Tank Trucks are to be equipped with 2 sections of lined hoses and are to be equipped with or have pump
			SHIP TO: Rhône-Poulenc Inc. 3 Cedar Chemical Corp. Highway 262 South West Helena, AR. 72390
			SEND FREIGHT BILLS TO: Rhône-Poulenc Inc. P.O. Box 125 Hammond Junction, N.J. 08052

			1991				
01		2002	1991				

[illegible]

Deliver To SEE BELOW	Building	Room	Requisitioner
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RHÔNE-POULENC

DIVISION

CORP. ADMIN.

**ASHLAND CHEMICAL CO.
P.O. Box 13305
TO Memphis, TN. 38113**

PURCHASE ORDER

DATE ORDERED 8/22/86	VERSION NO. 8	DATE RECEIVED 8/22/86	ORDER NUMBER 86-78583
<input type="checkbox"/> YES <input type="checkbox"/> NO	SEE BELOW		

- | | | |
|----------------------------|----------------------------|--|
| B
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P
T
O | 1. FREEPORT, TX. 77541 - 6213 HWY. 332 E.
2. ROCHESTER, N.Y. 14613 - 1000 DRIVING PARK AVE.
3. LAKEWOOD, N.J. 08701 - 1859 CORPORATE RD. WEST
4. NEW BRUNSWICK, N.J. 08903 - 298 JERSEY AVE.
5. NEWTON, N.J. 07800 - 10 PATERSON AVE.
6. PORTLAND, OR. 97210 - 8200 N.W. ST. HELENS RD.
7. MT. PLEASANT, TN. 38474 - ARROW MINES ROAD
8. MONMOUTH JUNCTION, N.J. 08852 - BLACK HORSE LANE
9. NEW YORK, N.Y. 10017 - 52 VANDERBILT AVE.
10. NEW BRUNSWICK, N.J. 08903 - 120 JERSEY AVE.
11. WILLIAMSTOWN, MA. 01267 - 330 COLE AVE.
12. MONMOUTH JUNCTION, N.J. 08852 P.O. BOX 125
13. NEW BRUNSWICK, N.J. 08903 P.O. BOX 2009
14. SEE BELOW
15. |
|----------------------------|----------------------------|--|

CONFIRMING
TO:

Bill Whitlock

ON **8/22/86**

DATE REQUIRED DELIVER WEEK OF 9/2/86	SHIP VIA TANK TRUCK	ROUTE	MARKS TO APPEAR ON ALL INVOICES, CONTAINERS AND SHIPPER DOCUMENTS P.O. 86-78583	TERMS 5 1 1/2% 10 DAYS 1% 10 DAYS 2% 10 DAYS NET 10 DAYS NET 30 DAYS OTHER (SPECIFY BELOW)
PPD	COLL	ADD	ALLOWED	P.O.B.

DELIVERED

ITEM	QTY. ORDERED	PRODUCT CODE OR PROJECT NO.	DESCRIPTION
1	45,100 lbs.	3-1320-00	DIMETHYLACETAMIDE 99+%
SHIP TO: Rhône-Poulenc Inc. S Cedar Chemical Co. Highway 242 South W. Helena, AR. 72390			
NOTE: All Tank Trucks are to be equipped with two (2) sections of Vined hoses & are to be pressurized or have pumps.			

01	2400	10011							

Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Sig.	Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Sig.

[Signature] **W. Schuler**

RHÔNE-POULENC INC.

P O Box 125 - Black Horse Lane - Monmouth Junction New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

John Joel Guy
Clay Town

September 5, 1986

Mr. Charlie Parker
Cedar Chemical Corp.
Highway 242 South
W. Helena, AR 72390

Dear Charlie:

With regard to the current campaign to produce RP-15, attached are receiving reports for the 2 orders issued thus far for Meta Cresol. It is anticipated a 3rd order will be issued shortly to cover the balance of the requirement.

Very truly yours,

RHONE POULENC, INC.

E. Schroder

E. Schroder
Purchasing Agent

ES/sg



ADEQ0021183

Deliver To R.P.X. Cedar Chem. Corp. N. Helena, AR	Building	Room	Requisitioner AG
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DIVISION CORP. ADMIN.

MERICHEN CO.
4800 Texas Commerce Tower
Houston, TX. 77002

PURCHASE ORDER			
DATE	QUANTITY	PRICE	ORDER NO.
8/21/86			86-78579
SEE BELOW			

DATE OF ORDER	QUANTITY	PRICE	ORDER NO.
8/21/86			86-78579
SEE BELOW			
1. FREEPORT, TX. 77541 - 6213 HWY. 332 E.			
2. ROCHESTER, N.Y. 14613 - 1000 DRIVING PARK AVE.			
3. LAKEWOOD, N.J. 08701 - 1669 CORPORATE RD. WEST			
4. NEW BRUNSWICK, N.J. 08903 - 298 JERSEY AVE.			
5. NEWTON, N.J. 07800 - 10 PATERSON AVE.			
6. PORTLAND, OR. 97210 - 6200 N.W. ST. HELENS RD.			
7. MT. PLEASANT, TN. 38474 - ARROW MINES ROAD			
8. MONMOUTH JUNCTION, N.J. 08852 - BLACK HORSE LANE			
9. NEW YORK, N.Y. 10017 - 52 VANDERBILT AVE.			
10. NEW BRUNSWICK, N.J. 08903 - 120 JERSEY AVE.			
11. WILLIAMSTOWN, MA. 01267 - 330 COLE AVE.			
12. MONMOUTH JUNCTION, N.J. 08852 P.O. BOX 125			
13. NEW BRUNSWICK, N.J. 08903 P.O. BOX 2009			
14. SEE BELOW			
15. SEE BELOW			

CONFIRMING TO: **Ann Lee** ON

DATE REQUIRED AT DESTINATION	SHIP VIA	ROUTE	TERMS TO APPEAR ON ALL INVOICES, PACKAGES AND SHIPMENT DOCUMENTS
SEE BELOW	TANK TRUCK-Miller Transporters (713-457-6348/9)		
FPD	COLL	ADD	ALLOWED
	X		
HOUSTON TX.			P.O. 86-78579
			Release No.

ITEM	QTY. ORDERED	PRODUCT CODE OR PROJECT NO.	DESCRIPTION
1	Approx. 200,000 lbs.	9-1250-00	NETA CRESOL 99% Min.
			First shipment to ARRIVE west of 8/2/86.
			All other Releases to be made by Charlie Parker, Cedar Chem. Corp. (801-572-3781) Merichem Customer Service contact Ann Lee (800-231-3030)
			NOTE: Tank trucks are to be equipped with 2 sections of lined hoses and are to be pressurized or have pumps
			SHIP TO: Rhone-Poulenc Inc. 1 Cedar Chemical Corp. Highway 242 South West Helena, AR. 72390
			CERTIFICATES OF ANALYSIS required on all shipments. Send to attn. Quality Control Mgr. at receiving location

01	2400	19011							

Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Sig.	Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Sig.

ADE00021183

Deliver To R.P. Cedar Chemical Corp. N. Helena AR.	Building	Room	Requisitioner AS
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DIVISION **CORP. ADMIN.**

TO **LCP Chemicals & Plastics Inc.
Baritan Plaza II
Baritan Center
Edison, N.J. 08837**

PURCHASE ORDER

<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	DATE 8/21/86	NUMBER 4-78581
SEE BELOW		

BILL TO	SHIP TO	1. FREEPORT, TX. 77541 - 8213 HWY 332 E.
		2. ROCHESTER, N.Y. 14613 - 1000 DRIVING PARK AVE.
		3. LAKEWOOD, N.J. 08701 - 1688 CORPORATE RD. WEST
		4. NEW BRUNSWICK, N.J. 08903 - 288 JERSEY AVE.
		5. NEWTON, N.J. 07800 - 10 PATERSON AVE.
		6. PORTLAND, OR. 97210 - 8200 N.W. ST. HELENS RD.
		7. MT. PLEASANT, TN. 38474 - ARROW MINES ROAD
		8. MONMOUTH JUNCTION, N.J. 08852 - BLACK HORSE LANE
		9. NEW YORK, N.Y. 10017 - 52 VANDERBILT AVE.
		10. NEW BRUNSWICK, N.J. 08903 - 120 JERSEY AVE.
		11. WILLIAMSTOWN, MA. 01267 - 330 COLE AVE.
		12. MONMOUTH JUNCTION, N.J. 08852 P.O. BOX 125
		13. NEW BRUNSWICK, N.J. 08903 P.O. BOX 2009
		14. SEE BELOW
		15.

CONFIRMING TO: **Victor Edwards** ON **8/15/86**

DATE REQUIRED AT DESTINATION	SHIP VIA	ROUTE	TERMS
AS RELEASED	TANK TRUCKS		P.O. 404-78581 Release No.
PPD	COLL	ADD	
X			
S.P. freight equipt with MUSCLE SIGNALS, AL.			

ITEM	QTY. ORDERED	PRODUCT CODE OR PROJECT NO.	DESCRIPTION
1	Approx. 250,000 lbs.	9-1190-00	CAUSTIC POTASH 48% LIQUID
<p>Releases to be made by Charlie Parker, Cedar Chem. Corp. (501-572-3701) LCP Customer Service (800-432-5082)</p> <p>NOTE: Tank trucks are to be equipped with 2 sections of lined hoses and are to be pressurized or have pump CERTIFICATES OF ANALYSIS required on all shipments.</p> <p>Send to Attn. Quality Control Mgr. at receiving location</p> <p>SHIP TO: Rhône-Poulenc Inc. 3 Cedar Chemical Corp. Highway 242 South West Helena, AR. 72390</p> <p>FREIGHT/BILLS TO BE SENT TO: Rhône-Poulenc Inc. P.O. Box 125 Monmouth Junction, N.J. 08852 Attn: Traffic Dept.</p>			

01	2400	19001									

Item	Date	Receiving Report No.	Qty. Rcvd	Balance Due	Sig.	Item	Date	Receiving Report No.	Qty. Rcvd	Balance Due	Sig.

Deliver To RP, INC. Cedar Chem. Corp., Niagara, N.Y.	Building	Room	Registration AS
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DIVISION **CORP. AMER.**

OCCIDENTAL CHEMICAL CORP.
P.O. Box 344
TO Niagara Falls, N.Y. 14302

PURCHASE ORDER			
DATE 8/21/76	NUMBER 86-78580		

<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	DATE 8/21/76	NUMBER 86-78580
1. FREEPORT, TX. 77541 - 6213 HWY. 332 E. 2. ROCHESTER, N.Y. 14613 - 1000 DRIVING PARK AVE. 3. LAKEWOOD, N.J. 08701 - 1669 CORPORATE RD. WEST 4. NEW BRUNSWICK, N.J. 08903 - 298 JERSEY AVE. 5. NEWTON, N.J. 07800 - 10 PATERSON AVE. 6. PORTLAND, OR. 97210 - 6200 N.W. ST. HELENS RD. 7. MT. PLEASANT, TN. 38474 - ARROW MINES ROAD 8. MONMOUTH JUNCTION, N.J. 08852 - BLACK HORSE LANE 9. NEW YORK, N.Y. 10017 - 62 VANDERBILT AVE. 10. NEW BRUNSWICK, N.J. 08903 - 120 JERSEY AVE. 11. WILLIAMSTOWN, MA. 01267 - 330 COLE AVE. 12. MONMOUTH JUNCTION, N.J. 08852 P.O. BOX 125 13. NEW BRUNSWICK, N.J. 08903 P.O. BOX 2009 14. SEE BELOW 15.			

CONFIRMING TO: **Dann Schinack** ON

DATE REQUIRED AT DESTINATION SEE BELOW	SHIP VIA TANK TRUCK	ROUTE Miller Transporters (800-648-5378) Woody Ketterle Chemical Loaner (518-436-7031)	TERMS 5 1 1/2% 10 DAYS 2 1% 10 DAYS 3 5% 10 DAYS 4 NET 10 DAYS 5 NET 30 DAYS 6 OTHER (SPECIFY BELOW)
PPD. COLL. ADD.	ALLOWED	P.O. 86-78580 Niagara No.	
1		NIAGARA FALLS N.Y.	

ITEM	QTY. ORDERED	PRODUCT CODE OR PROJECT NO.	DESCRIPTION
1	Approx. 500,000 lbs.	9-1299-00	1,4-DICHLOROBENZOTRIFLUORIDE 99% Min.
First shipment to arrive end of 9/2/76. All other releases to be made by Charlie Parker, Cedar Chemical Corp. (501-572-3701) Occidental Customer Service Rep. Dann Schinack (800-620-1144) NOTE: All Tank Trucks are to be equipped with 2 sections of lined hoses and are to be unguaged or have pump SHIP TO: Rhone-Poulenc Inc. 3 Cedar Chemical Corp. Highway 202 South West Helena, AR. 72390 SEND FREIGHT BILLS TO: Rhone-Poulenc Inc. P.O. Box 125 Monmouth Junction, N.J. 08852 Attn: Traffic Dept.			
	03	2468	12991

Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Sig.	Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Sig.

Deliver To SEE BELOW	Building	Room	Requisitioner
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DIVISION CORP. ADMIN.

TO **ASHLAND CHEMICAL CO.
P.O. Box 13305
Memphis, TN. 38119**

PURCHASE ORDER	
DATE	NUMBER
8/22/86	86-78583

<input type="checkbox"/> YES	<input type="checkbox"/> NO	SEE BELOW
1. FREEPORT, TX. 77541 - 6213 HWY. 332 E. 2. ROCHESTER, N.Y. 14813 - 1000 DRIVING PARK AVE. 3. LAKEWOOD, N.J. 08701 - 1669 CORPORATE RD. WEST 4. NEW BRUNSWICK, N.J. 08903 - 298 JERSEY AVE. 5. NEWTON, N.J. 07800 - 10 PATERSON AVE. 6. PORTLAND, OR. 97210 - 6200 N.W. ST. HELENS RD. 7. MT. PLEASANT, TN. 38474 - ARROW MINES ROAD 8. MONMOUTH JUNCTION, N.J. 08852 - BLACK HORSE LANE 9. NEW YORK, N.Y. 10017 - 52 VANDERBILT AVE. 10. NEW BRUNSWICK, N.J. 08903 - 120 JERSEY AVE. 11. WILLIAMSTOWN, MA. 01267 - 330 COLE AVE. 12. MONMOUTH JUNCTION, N.J. 08852 P.O. BOX 128 13. NEW BRUNSWICK, N.J. 08903 P.O. BOX 2009 14. SEE BELOW 15.		

CONFIRMING TO: **Gil Whitlock** ON **8/22/86**

DATE REQUIRED DELIVER WEEK OF 9/8/86	SHIP VIA TANK TRUCK	ROUTE	TERMS 5 1 1/2% 10 DAYS 2 1% 10 DAYS 3 2% 10 DAYS 4 NET 10 DAYS 5 NET 30 DAYS 6 OTHER (SPECIFY BELOW)
PPO	COLL	ADD	ALLOWED

ITEM	QTY ORDERED	PRODUCT CODE OR PROJECT NO.	DESCRIPTION
1	46,100 lbs.	3-1320-00	DDIETHYLACETAMIDE 98+%
<p>SHIP TO: Rhône-Poulenc Inc. 1 Cedar Chemical Co. Highway 242 South V. Helena, AL. 36081</p>			
<p>NOTE: All Tank Trucks are to be equipped with two (2) sections of lined hoses & are to be pressurized or have pumps.</p>			

81	2408	10081			

Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Sig.	Item	Date	Receiving Report No.	Qty. Rcvd.	Balance Due	Sig.

orig to Neil

RHÔNE-POULENC INC.

P O Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

May 18, 1987

Cedar Chemical
Highway 242 South
West Helena, Arkansas 72390

Gentlemen:

At the end of May, we have scheduled a physical inventory of all products stored at all outside locations.

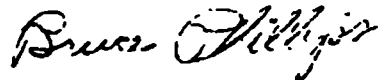
Therefore, we respectfully request that you complete the form enclosed showing all Rhone-Poulenc owned material in your possession as of the close of business May 31, 1987. If you discover any damaged inventory please make a note of it on the form.

Several of our outside storage facilities will be selected for an internal audit. If your location is selected, the person conducting the audit will contact you.

Please direct your response and any questions to Mr. Robert Dunn (201-821-2091) or Mr. George Ruskai (201-821-2092) at the address above. A self-addressed, stamped envelope is enclosed for your convenience.

Your prompt and full cooperation will be greatly appreciated.

Very truly yours,



Bruce A. Phillips
Corporate Controller

BAP/alw
Enclosure



ADEQ0017385

RHÔNE-POULENC INC.

P.O. Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

Charlie
Tom
Richard
Joe
Ken
Joel

May 18, 1987

OVERNIGHT EXPRESS MAIL

Mr. Ron Cheves
Vice President
CEDAR CHEMICAL CORPORATION
5100 Poplar Avenue
24th Floor
Memphis, Tennessee 38137

Dear Mr. Cheves:

Pursuant to our Letter Agreement, dated September 5, 1986, please be advised that Rhone-Poulenc shall not issue future purchase orders for the production of either RP-15 or RP-10.

Very truly yours,

RHONE-POULENC INC.

By: Jean-Pierre Dal Pont
Jean-Pierre Dal Pont
Vice President
TECHNICAL SERVICES



ADEQ0017532

RHÔNE-POULENC INC.

P O Box 125 - Black Horse Lane - Monmouth Junction New Jersey 08852 - Telephone (201) 297-0100 - Telex 844527

May 18, 1987

OVERNIGHT EXPRESS MAIL

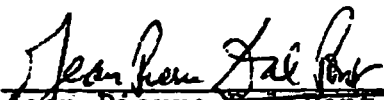
Mr. Ron Cheves
Vice President
CEDAR CHEMICAL CORPORATION
5100 Poplar Avenue
24th Floor
Memphis, Tennessee 38137

Dear Mr. Cheves:

Pursuant to our Letter Agreement, dated September 5, 1986, please be advised that Rhone-Poulenc shall not issue future purchase orders for the production of either RP-15 or RP-10.

Very truly yours,

RHONE-POULENC INC.

By: 
~~Jean-Pierre Dal Pont~~
Vice President
TECHNICAL SERVICES

CEDAR INTERNAL CORRESPONDENCE

DATE: 5/26/87

TO: Geoff Pratt

FROM: John Miles 

**cc: Lodice
Satterfield
Parker
Robbins
Porter**

SUBJECT: R-P project (RP-15 & RP-10)

1. We need to know disposition of the following items:
 - Raw materials
 - Product
 - Waste
 - Lab retains
 - Rail Cars
2. Please address what further production, accounting, and technical information is required.
3. Please clarify who is financially responsible for cleaning of storage tanks & disposal of any waste generated.

RHÔNE-POULENC INC.

P O Box 125 - Black Horse Lane - Monmouth Junction, New Jersey 08852 - Telephone (201) 297-0100 - Telex. 844527

CC: Neil
Charlie
Tom
Richard
Greg
Joe
Ken
Joel

May 18, 1987

OVERNIGHT EXPRESS MAIL


Mr. Ron Cheves
Vice President
CEDAR CHEMICAL CORPORATION
5100 Poplar Avenue
24th Floor
Memphis, Tennessee 38137

Dear Mr. Cheves:

Pursuant to our Letter Agreement, dated September 5, 1986, please be advised that Rhone-Poulenc shall not issue future purchase orders for the production of either RP-15 or RP-10.

Very truly yours,

RHONE-POULENC INC.

By: 
~~Jean-Pierre Dal Pont~~
Vice President
TECHNICAL SERVICES



ADEQ0017379

CETAR CHEMICAL CORPORATION
MEMPHIS. TN.

ORDER
DATE ORDER
NUMBER

SHIPPED

5/21/87 5107

INVOICE TO
RHONE POULENC INC.
ATTN: JEAN-PIERRE DAL PONT
P. O. BOX 125
MONMOUTH JUNCTION, NJ 08852

SHIPPED COMPLETE

SHIP TO
RHONE POULENC INC.
ATTN: JEAN-PIERRE DAL PONT
P. O. BOX 125
MONMOUTH JUNCTION, NJ 08852

REQUESTED	CUST. NO.	CUST. ORDER NO.	SALESMAN	PKT. PPD/COL
5/21/87	7330-01	86-78582	K. CHVES	PPD

SHIPPED FROM	FOR POINT	SHIP VIA	TERMS	DATE
WEST HELFNA PLANT	SHIPPING POINT		NET 10	5/31/87

QUANTITY	CONTAINER	ITEM	UNIT PRICE	BILLING	EXTENDED
SHIPPED	SIZE	NUMBER DESCRIPTION		UNIT	SALE PRICE
		RP 10 PRODUCTION	99,999.99		300
		RI 10 PRODUCTION	66,666.76		400
E		TO INVOICE YOU FOR PRODUCTION OF RI 10 AS FOLLOWS:			500
E		APR 23 THRU MAY 17 - 25 DAYS X \$6,666.67 = \$166,666.75			600
I		GIVE TO GEOFF PRATT FOR HIS HANDLING			700

INV. TOTAL 166,666.75

CEDAR CHEMICAL CORPORATION
MEMPHIS, TN.

ORDER
DATE

ORDER
NUMBER

SHIPPED

5/21/87 5106

INVOICE TO
RHONE POULENC INC.
ATTN: JEAN-PIERRE DAL PONT
P. O. BOX 125
MONMOUTH JUNCTION, NJ 08852

SHIPPED COMPLETE

SHIP TO
RHONE POULENC INC.
ATTN: JEAN-PIERRE DAL PONT
P. O. BOX 125
MONMOUTH JUNCTION, NJ 08852

REQUESTED	CUST. NO.	CUST. ORDER NO.	SALESMAN	FRT. PPD/COL
5/21/87	7350-01	87-7058	K. CHEVES	PPI

SHIPPED FROM	FOR POINT	SHIP VIA	TERMS	USE DATE
WEST HELENA PLANT	SHIPPING POINT		NET 10	5/31/87

QUANTITY	CONTAINER	ITEM	UNIT	BILLING	EXTENDED
SHIPPED	SIZE	NUMBER DESCRIPTION	PRICE	UNIT	SALL PRICE

		WASTE WATER CHARGES	11,129.92	300	
F		TO INVOICE YOU WITH WASTE WATER TREATMENT AS FOLLOWS:		400	
E		BATCHES 110 THRU 135 - 139,099 LBS Y @ .08 = \$11,129.92		500	
I		GIVE TO GEOFF PRATT FOR HIS HANDLING.		600	

INV. TOTAL 11,129.92

CEDAR CHEMICAL CORPORATION
MEMPHIS, TN.

ORDER ORDER
DATE NUMBER

SHIPPED

5/21/87 5108

INVOICE TO
RHONE-POULENC INC.
ATTN: JEAN-PIERRE DAL PONT
P. O. BOX 125
MONMOUTH JUNCTION, NJ 08852

SHIPPED COMPLETE

SHIP TO
RHONE-POULENC INC.
ATTN: JEAN-PIERRE DAL PONT
P. O. BOX 125
MONMOUTH JUNCTION, NJ 08852

REQUESTED	CUST. NO.	CUST. ORDER NO.	SALESMAN	FRT. PTD/COL
5/21/87	7350-01	HA-78582	K. CHEVEN	PPU

SHIPPED FROM	FOR COUNT	SHIP VIA	TERMS	DATE DATE
WEST HELENA PLANT	SHIPPING POINT		NET 10	5/31/87

QUANTITY	CONTAINER	ITEM	UNIT PRICE	EXTENDED
SHIPPED	SIZE	NUMBER DESCRIPTION	PRICE	UNIT SALE PRICE
		RP 15 PROJ SCOPE CHANGES	94,999.99	300
		RP 15 PROJ SCOPE CHANGES	20,000.01	400
		RP 10 PROJ SCOPE CHANGES	99,999.99	500
		RP 10 PROJ SCOPE CHANGES	99,999.99	600
		RP 10 PROJ SCOPE CHANGES	60,000.02	700
		CR 4000 GAL VESSEL	60,000.00	900
E		TO INVOICE YOU WITH SCOPE CHANGES AS PER ATTACHED LETTER.		1000
I		GIVE TO GEOFF PRATT FOR HIS HANDLING		1100

INV. TOTAL 325,000.00

PKG COST

RP-10

BALL PARK ESTIMATE

- I. BASIS: 300 M GAL TACKLE
 5000 GAL / DAY , 5 DAY / WK
 160 GAL / PALLET , 5X1 CASE , 1 GAL JUG

II. CAPITAL

1. FILLERS 2 in SERAC 2237-P2	\$ 40000
2. HEAT SEALER FOR CAPS	10000
3. STRETCH WRAP MACHINE / ROLLERS	<u>10000</u>
	\$ 60000

$$\$60M / 300M = \$0.20 / GAL$$

III. OPERATING SUPPLIES

		\$ / GAL
PALLET	\$ 8.00	0.0500
TRAY & CAP	\$ 2.00 / PALLET	0.0125
STRETCH WRAP	\$ 2.00 / PALLET	0.0125
FILTER AID		<u>0.0100</u>
		0.0850

IV. LABOR

$$8 \text{ MEN @ } (\$5.00 \times 1.45) / \text{HR} = \$0.095 / GAL$$

V. TOTAL

38¢ / GAL

VI. ITEMS NOT COVERED

1. WAREHOUSING - PKG MTRLS OR PRODUCT

Référence à rappeler
sur tous documents

COMMANDE N°

010/c087

010/c087



RHÔNE-POULENC

RHÔNE-POULENC AGROCHIMIE

14-20, RUE PIERRE BAIZET B.P. 8163
69263 LYON CEDEX 09 - TEL. 72 29 25 25
Soc Achats : Télax 308148 F Rhône - Fax 72 29 22 62
Soc Approvisionnement : Télax 308290 F Rhône - Fax 72 29 22 63

CACHET ET SIGNATURE DU FOURNISSEUR

LE 31 JUILLET 1990

CEDAR CHEMICAL CORPORATION
24TH FLOOR
5100 POPLAR AVENUE
MEMPHIS TN 38197 U.S.A.

A

Lo

REF 200032-A-04-80-1

CODE	QUANTITE	DESIGNATION / PRIX
305131A	29	A L ATTENTION DE M. GEOFFROY L. PRATT METHYLTHIOFENACOLONE OXIME PRIX : 13203.0000 DOLLAR USA PAR TONNE FOB WET HELENA PROV. : US ORIG. : US PRIX : 2011 : USD 1.20/LB + 150.000 USD FEE EMBALLAGE : 14 DRUMS THIS CORRESPONDS TO A PROCESSING OF 14 MT OF MCP INTO MCP. DOCUMENTS TO BE SENT TO F. DANION IN LYON : - RECEIPT NOTES FOR MCP - BILL OF LADING (2 ORIGINALS + 4 COPIES) - INVOICES (1 EX) - ANALYSIS CERTIFICATES FOR EACH EXTENSION - ORIGIN CERT. DATE - CONSIGNEE : RHONE-POULENC AGROCHIMIE (S O MAPROCHIM 50 RUE DE MONTGUYE BP 1093 70000 LE HAVRE FRANCE) - NOTIFICATION MAPROCHIM LE HAVRE - FORWARDING AGENT : MG MAHLER NEW ORLEANS (US) 2 ORIGINAL INVOICES TO BE SENT WITH TRANSPORT FOR CUSTOMS
Montant total		798.180 USD
FACTURATION A :		RP AGROCHIMIE BF 142 69400 SERVICE COMPTABILITE VILLEFRANCHE SUR SAONE
Date de livraison :		VOIR CI-DESSUS
		Négociateur F. DANION Approvisionnement S. LEMERY

Référence à rappeler
sur tous documents

COMMANDE N°

010/C067



RHÔNE-POULENC AGROCHIMIE

14-20, RUE PIERRE BAIZET B.P. 9163
69263 LYON CEDEX 09 - TEL 72 29 25 25
Soc Achats : Téléc 306148 F Rhône - Fax 72 29 22 62
Soc Approvisionnement : Téléc 306290 F Rhône - Fax 72 29 22 69

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AUG 6 1990

Ans'd.....

LE 31 JUILLET 1990

Aux conditions générales d'achat et de paiement
figurant au verso veuillez noter notre commande.

Accusé de réception ci-joint, à retourner revêtu
de votre cachet et de votre signature par retour
du courrier à :

CEDAR CHEMICAL CORPORATION
24TH FLOOR
5100 POPLAR AVENUE
MEMPHIS TN 38137 U.S.A.

R.P. AGROCHIMIE
ATT MELLE LAMBERT BP 9163
69263 LYON CEDEX 09

REF 000332-P-04-00-1

CODE	QUANTITE	DESIGNATION / PRIX
		<p>A L ATTENTION DE M. GEOFFROY L. PRATT</p> <p>CEDAR WILL MANAGE COMPLETELY THE TRANSPORTATION TO RHONE POULENC ELBEUF AND INVOICE RHONE POULENC AGROCHIMIE FOR THESE EXPENSES</p> <p>DELIVERY DATES FOB NEW ORLEANS : 20 T WEEK 38 20 T WEEK 40 20 T WEEK 42</p>
Montant total		798.180 USD
Lieu de stock X		
Négociateur		
FACTURATION A	RP AGROCHIMIE	SERVICE COMPTABILITE
	BP 442 69400	VILLEFRANCHE SUR SAONE
Date de livraison :		
VOIR CI-DESSUS		
Approvisionnement		<i>C. Baudouin</i>

Référence à rappeler
sur tous documents

COMMANDE N°

01070387



RHÔNE-POULENC AGROCHIMIE

14-20, RUE PIERRE BAIZET B.P. 9163
69263 LYON CEDEX 09 - TEL 72 29 25 25
See Achats : Télax 306148 F Rhône - Fax 72 29 22 62
See Approvisionnement : Télax 306290 F Rhône - Fax 72 29 22 63

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LE 31 JUILLET 1990

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du courrier à :

CEDAR CHEMICAL CORPORATION
24TH FLOOR
5100 POPLAR AVENUE
MEMPHIS TN 38197 U.S.A.

R.P. AGROCHIMIE
ATT MELLE LAMBERT BP 9163
69263 LYON CEDEX 09

REF 200007-P-04 80-3

CODE	QUANTITE	DÉSIGNATION / PRIX
306131A	50	A L ATTENTION DE M. GEOFFROY L. PRATT METHYLTHIOPIRACLOLONE OXINE PRIX : 13293,000 DOLLAR USA PAR TONNE FOR WEST HELENA PROV. : US ORIG. : US PRIX : SOIT : USD 4.90/LB + 150,000 USD FEE EMBALLAGE : IN DRUMS THIS CORRESPONDS TO A PROCESSING OF 54 MT OF MCP INTO MTPO. DOCUMENTS TO BE SENT TO F. CANION IN LYON : - RECEIPT NOTES FOR MCP - BILL OF LADING (2 ORIGINALS + 4 COPIES) - INVOICE (4 EX) - ANALYSIS CERTIFICATES FOR EACH EXPEDITION - ORIGIN CERTIFICATE - CONSIGNEE : RHONE POULENC AGROCHIMIE C/O MAPROCHIM 58 RUE DE MULHOUSE BP 1693 75062 LE HAVRE FRANCE - NOTIFICATION MAPROCHIM LE HAVRE - FORWARDING AGENT : MS MAHLER NEW ORLEANS (US) 2 ORIGINAL INVOICES TO BE SENT WITH TRANSPORT FOR CUSTOMS
Montant total	796,110 LFL	Lieu de stock X
FACTURATION A :	RP AGROCHIMIE BP 412 69400 VILLEFRANCHE SUR SÂONE	SERVICE COMPTABILITE F. CANION
Date de livraison :	VOIR LES DES	Approvisionnement LAMBERT

Référence à rappeler
sur tous documents

COMMANDE N°

0167/067



RHÔNE-POULENC AGROCHIMIE

14-20, RUE PIERRE BAIZET B.P. 9163
69283 LYON CEDEX 09 - TEL 72 29 25 25
Sce Achats : Télax 306148 F Rhône - Fax 72 29 22 62
Sce Approvisionnement : Télax 306290 F Rhône - Fax 72 29 22 63

CACHET ET SIGNATURE DU FOURNISSEUR

LE 11 JUILLET 1990

CEDAR CHEMICAL CORPORATION
24TH FLOOR
5100 POPLAR AVENUE
MEMPHIS TN 38137 U.S.A.

A

La

REP. 200302-A-04-00-1

CODE	QUANTITE	DESIGNATION/PRIX
1061314	50	A L ATTENTION DE M. GEOFFROY L. PRATT METHYLTHIOPINACOLONE OXIME PRIX : 13303.0000 DOLLAR USA PAR TONNE FOB WEST HELENA PROV.:US ORIG.:US PRIX : SOIT : USD 4.90/LB + 150.000 USD FEE EMBALLAGE : IN DRUMS THIS CORRESPONDS TO A PROCESSING OF 54 MT OF MCP INTO MTPO. DOCUMENTS TO BE SENT TO F. DANION IN LYON : - RECEIPT NOTES FOR MCP - BILL OF LADING (2 ORIGINALS + 4 COPIES) - INVOICES (4 EX) - ANALYSIS CERTIFICATES FOR EACH EXPEDITION - ORIGIN CERTIFICATE - CONSIGNEE : RHONE-POULENC AGROCHIMIE 1076 MAPROCHIM 50 RUE DE M. HOU BP 1093 76062 LE HAVRE (FRANCE) - NOTIFIED TO MAPROCHIM LE HAVRE - DE MARCHEMENT : MG MAHLER NEW ORLEANS (US) 2 ORIGINAL INVOICES TO BE SENT WITH TRANSPORT FOR CUSTOMS
Montant total		297.000 USD
Lieu de stock		
Négociateur		
FACTURATION A :	RE AGROCHIMIE BP 442 69400	SERVICE COMPTABILITE VILLEFRANCHE SUR RHONE
Date de livraison :		VOIR -DESS
Approvisionnement		

Référence à rappeler
sur tous documents

COMMANDE N°

010/C087



RHÔNE-POULENC AGROCHIMIE

14-20, RUE PIERRE BAIZET B.P. 9163
69263 LYON CEDEX 09 - TEL. 72 29 25 25
Ses Achats : Télax 308148 F Rhône - Fax 72 29 22 62
Ses Approvisionnement : Télax 308290 F Rhône - Fax 72 29 22 69

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AUG 6 1990

And'd.....

LE 31 JUILLET 1990

Aux conditions générales d'achat et de paiement
figurant au verso veuillez noter notre commande.

Accusé de réception ci-joint, à retourner revêtu
de votre cachet et de votre signature par retour
du courrier à :

CEDAR CHEMICAL CORPORATION
24TH FLOOR
5100 POPLAR AVENUE
MEMPHIS TN 38137 U.S.A.

R.P. AGROCHIMIE
ATT MELLE LAMBERT BP 9163
69263 LYON CEDEX 09

RFP 30832-P-04-80-X

CODE	QUANTITE	DESIGNATION/PRIX
		A L ATTENTION DE M. GEOFFROY L. PRATT CEDAR WILL MANAGE COMPLETELY THE TRANSPORTATION TO RHONE POULENC ELBEUF AND INVOICE RHONE POULENC AGROCHIMIE FOR THESE EXPENSES DELIVERY DATES FOB NEW ORLEANS : 20 T WEEK 38 20 T WEEK 40 20 T WEEK 42
Montant total	798.180 USD	Lieu de stock X
FACTURATION A :	RP AGROCHIMIE BP 442 69400	SERVICE COMPTABILITE VILLEFRANCHE SUR SAONE
Date de livraison :	VOIR CI-DESSUS	Négociateur F. DANION Approvisionneur <i>C. Chaut</i>

Référence à rappeler
sur tous documents

COMMANDE N°

01070027



RHÔNE-POULENC AGROCHIMIE

14-20, RUE PIERRE BAIZET B.P. 9163
69263 LYON CEDEX 09 - TEL 72 29 25 25
Soc Achats : Télax 308148 F Rhône - Fax 72 29 22 62
Soc Approvisionnement : Télax 308290 F Rhône - Fax 72 29 22 63

CACHET ET SIGNATURE DU FOURNISSEUR

LE 21 JUILLET 1990

CEDAR CHEMICAL CORPORATION
214 FLOOR
610 POPLAR AVENUE
MEMPHIS TN 38101 U.S.A

A

Le

REF 200032-P-0450-X

CODE	QUANTITE	DESIGNATION / PRIX
		A L'ATTENTION-DE M. GEOFFROY L. PRATT ---
		CEDAR WILL BE PAGE COMPLETELY THE TRANSPORTATION TO RHONE POULENC ELBE T AND INVOICE RHONE POULENC AGROCHIMIE FOR THESE EXPEN- DELIVERY DATE: FRS NEW ORLEANS : 20 1 WEEK 36 20 1 WEEK 40 20 1 WEEK 42
Montant total	798.180 USD	Lieu de stock
FACTURATION A	RP AGROCHIMIE BP 442 64400	SERVICE COMPTABILITE VILLEFRANCHE SUR SAONE
Date de livraison	VOIR CI-DESSUS	Négociateur F. DANION Approvisionneur <i>C. Boute</i>



RHÔNE-POULENC

22 OCT. 1999

BUSINESS CONFIDENTIAL

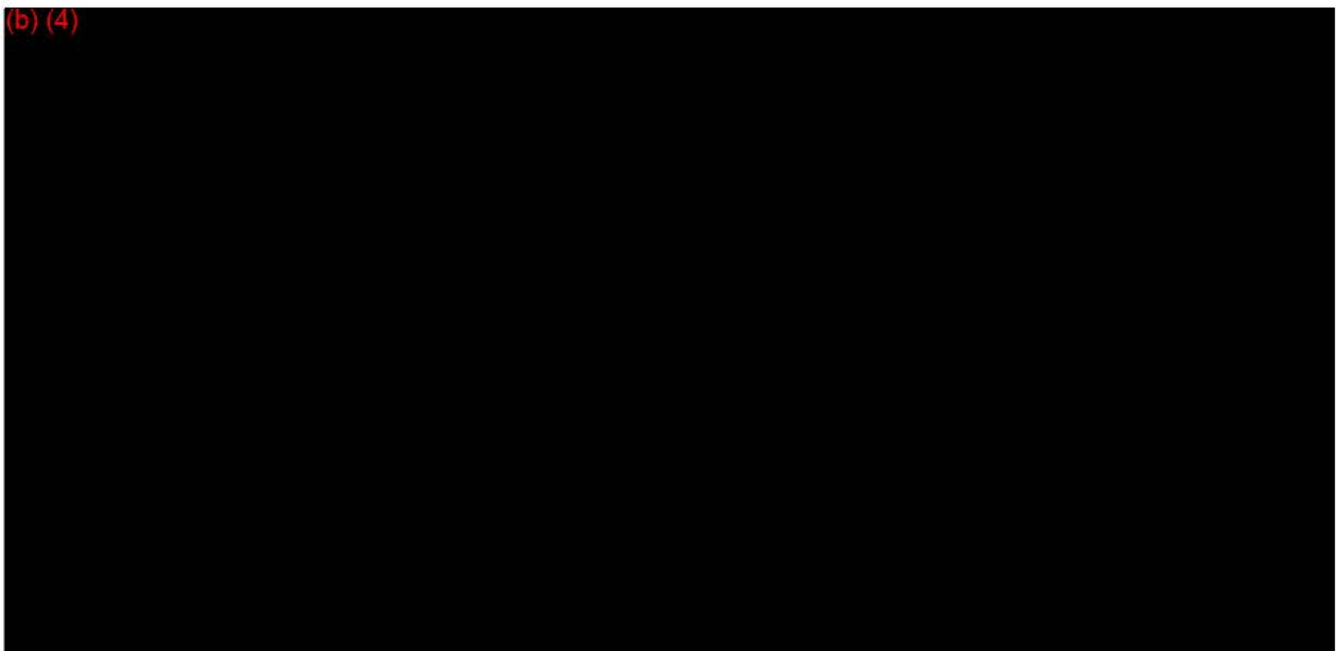
RHÔNE-POULENC SECTEUR AGRO	Department:	Reference :	DOC Nr : 438752
	R&D/CRLD/AN	9516131	Date : 26/07/95
			GOoD ID: 8057
External Performer(s) :			

Author(s) :

Internal : J. COUSIN

External :

Title : TECHNICAL CYCLANILIDE



(b) (4)

**RHÔNE-POULENC****BUSINESS CONFIDENTIAL****SECTEUR AGRO**

RHÔNE-POULENC AGROCHIMIE
14-20 RUE PIERRE BAZET B.P. 9163
69263 LYON CEDEX 09
TEL. 72.29.23.23 - FAX 72.29.29.67
TLX 306142 RHONE

Technical Cyclanilide**HPLC determination of**

**2,4 dichloroaniline, RPA 090899, RPA 090945,
RPA 093903, RPA 111030 and RPA 114924**

Research and Development**Centre de Recherche de La Dargoire****Method C-821-07-95 (E)**

Date : 28/07/1995

Author : J. COUSIN

Approved by : J. COUSIN

28/07/95
J. Cousin

The information herein is **CONFIDENTIAL** and is the property of RHÔNE-POULENC SECTEUR AGRO. It is provided for the sole purpose of supporting the application for registration and may not be disclosed to other parties nor be used for any other purpose.

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RHONE-POULENC

22 OCT. 1999

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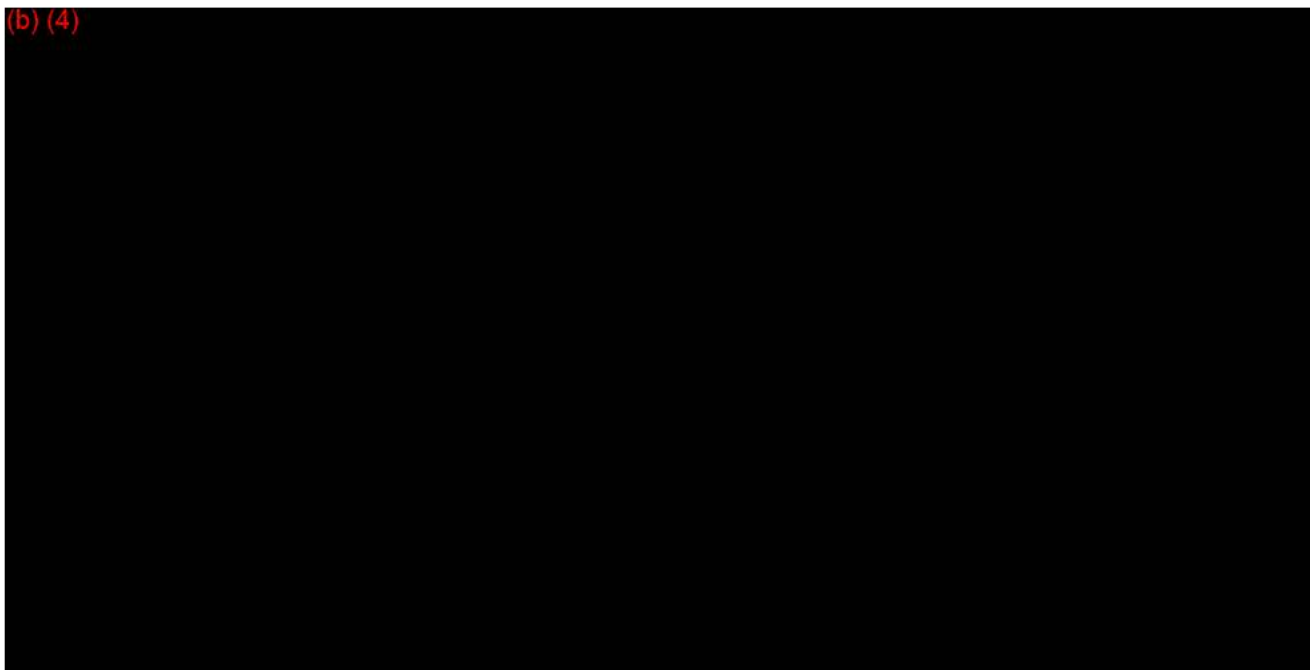
RHÔNE-POULENC SECTEUR AGRO	Department:	Reference :	DOC Nr : 438752
	R&D/CRLD/AN	9516131	Date : 26/07/95
			GOoD ID: 8057
External Performer(s) :			

Author(s) :

Internal : J. COUSIN

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Title : TECHNICAL CYCLANILIDE



(b) (4)

**RHÔNE-POULENC****BUSINESS CONFIDENTIAL****SECTEUR AGRO**

RHÔNE-POULENC AGROCHIMIE
14-20 RUE PIERRE BAIZET B.P. 9163
69263 LYON CEDEX 09
TEL. 72.29.25.25 - FAX 72.29.29.67
TLX 306147 F RHÔNE

Technical Cyclanilide**HPLC determination of**

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RHÔNE-POULENC

RECU D.I.F./D.I.P.

22 OCT. 1999

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RHÔNE-POULENC SECTEUR AGRO	Department:	Reference :	DOC Nr : 438752
	R&D/CRLD/AN	9516131	Date : 26/07/95
			GOoD ID: 8057
External Performer(s) :			

Author(s) :

Internal : J. COUSIN

External :

Title : TECHNICAL CYCLANILIDE

(b) (4)



**RHÔNE-POULENC****BUSINESS CONFIDENTIAL****SECTEUR AGRO**

RHÔNE-POULENC AGROCHIMIE
14-20 RUE PIERRE BALZET B.P. 9163
69263 LYON CEDEX 09
TEL. 72.29.25.25 - FAX 72.29.29.67
TLX 306147 F RHÔNE

Technical Cyclanilide

HPLC determination of
2,4 dichloroaniline, RPA 090899, RPA 090945,
RPA 093903, RPA 111030 and RPA 114924

Research and Development**Centre de Recherche de La Dargoire****Method C-821-07-95 (E)**

Date : 28/07/1995

Author : J. COUSIN

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28/07/95
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Item No	Std	Act	R/M Used	F/G Prod	100% AI	C	182	5850	96,725.79	S	808	1460	(16,687.99)
Acetic Anhydride	41710	0.5800	0.5961	128,970						S	807	1460	(54,167.40)
Sulfuric Acid	41010									S	704	1460	
Ethylene Dichloride	41720	0.0550	0.1050	22,720						S	808	1460	(4,998.40)
50% Caustic	41530	0.5200	1.2060	260,900						S	763	1460	(20,872.00)
Rock Salt	45350									S	801	1460	
R118118	90200	3.5400	2.9829	641,000									
FA Prod'n:	Item No	Std	Act	R/M Used	F/G Prod								
FA Prod'n:	17000				23,720					S	849	1420	(87,764.00)
Nitromethane	42680	.8600	4.594	10,698						C	183	5680	(15,039.24)
Formaldehyde	41540	2.8000	-7.202	-17,083						C	183	5590	(1,879.13)
Methanol	42840	2460	9798	23,240						C	183	5850	(3,021.20)
Sulfuric Acid	41520	0660								S	762	1460	
Raney Nickel	42690	0110								C	183	5600	
-hydrogen	41030	1420								C	183	5570	
50% Caustic	41530	1300								S	762	1460	
FMC 5-Nitro Prod'd:	Item No	Std	Act	R/M Used	F/G Prod								
5-Nitro	5290				30,813	100% AI							
Step 3	90800		4.0991	128,305									
Step 4	90810		0.0299	921									
Step 5	90820												
Chlorine	90720		0.6068	18,758									
A Sulfate	90710		1.0260	31,613									
G Acid	90700		0.4099	12,629									
50% Caustic	45090		1.2488	38,480						S	8000	1230	(2,308.80)
20% Oleum	90770		4.0763	125,602									
Methanol	90790		1.2941	39,874									
Soda Ash	90740		0.3310	10,200									
Toulene	90760		4.8457	149,312									
93% Sulfuric Acid	90750												
Mixed Acid	90730		0.4265	13,142									
Packaged Plant:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs						
Pure Trom 25 Kg Pkg'd	17120					-67	(3,693)			C	183	6740	(13,684.25)
Tromethamine Bulk Used	17000				(3,693)					C	183	6860	(13,684.10)
Trometamol 25 Kg	17220									S	845	1420	
Trometamol 50 Kg	17240									C	181	6740	
Tra Ultr Pure 100Kg	17250									C	181	6740	
Pure Tria-Hcl 100Kg	17260									C	181	6740	
Tromethamine Bulk Used	17000									C	181	6860	
Wham Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs						
Wham 2x2.5	3180					1	5			S	832	1420	
Wham 100L	3230									S	828	1420	
Wham 30	3240					723	21,690			S	805	1420	
S Wham 30	3350					2,240	67,200			S	831	1420	
S Wham 2x2.5's	3360			</									

Shipped from Plant:

	Item No	Location		Containers	lbs/gals
Prop Tech	3000	4	Plant		155,680
DCA	3020	4	Plant		
Diuron	3030	4	Plant		62,400
Flake Tech	3050	4	Plant		
Flake Tech 25KG	3060	4	Plant		
3# 50 L	3180	4	Plant		
3# Bulk	3200	4	Plant		
3# 55's	3210	4	Plant	61	3,355
3# 20L	3220	4	Plant	961	5,078
3# 200L	3250	4	Plant	829	33,236
Propanex 500 55's	3260	4	Plant		
4# 20L	3290	4	Plant	180	1,003
4# Bulk	3300	4	Plant		28,912
4# 55's	3310	4	Plant	414	22,770
4# 210 L	3320	4	Plant		
4# 200 L	3330	4	Plant	215	11,381
4# 35's	3340	4	Plant	4,117	144,085
Stam Bulk	3400	4	Plant		94,368
Stam 35's	3420	4	Plant	1,430	50,050
Propanil 3# 35's	10010	4	Plant		
Propanil 360 210L	10020	4	Plant		
Propanil 360 200L	10030	4	Plant		
Superox 360 200L	10040	4	Plant		
Superox 480 200L	10050	4	Plant		
Ethephon 100%	15740	4	Plant		
Tromethamine Bulk	17000	4	Plant		
Tham 25 KG	17020	4	Plant		
Tromethamine 25KG	17120	4	Plant	40	2,205
Trometamol 50KG	17240	4	Plant		
Tra Ultra Pure 100Kg	17250	4	Plant		
Pure Tria-Hcl 100Kg	17280	4	Plant		
4# Emul	40600	4	Plant		
Emul	40900	4	Plant		
Isoph	40500	4	Plant		
TA-40 Waste Water		4	Plant		

Shipped from O/S Plant:

	Item No	Location		Containers	lbs/gals
Diuron	3030	10	B/H		31,200
Diuron	3030	52	Gulf States		42,857
Diuron	3030	97	In Transit		
Diuron Col 248 Kg	3040	86	Odom		
Flaked Tech	3050	10	B/H		(534,000)
Flaked Tech	3050	86	Odom		(123,000)
Flaked Tech 25Kg	3060	78	Odom-Pachuta	200	11,020
Flaked Tech 25Kg	3060	86	Odom		
Diuron Col 224 Kg	3070	86	Odom		
Bandit 200L	3140	86	Odom		
Wham! EZ 2x2 5 gal	3180	10	B/H		
Wham! EZ 2x2 5 gal	3180	86	Odom		
Wham 100 Liter	3230	86	Odom		
Wham 30gls	3240	10	B/H	(27)	(810)
Wham 30gls	3240	59	Rice Farmers		
Wham 30gls	3240	86	Odom	530	15,900
Wham 30gls	3240	86	Amer Rice		
Wham 5gls	3260	10	B/H		
Wham 5gls	3260	86	Odom		
Wham 5gls	3260	86	Amer Rice		
4# 35	3340	10	B/H		
4# 35	3340	15	Amer Whse		
4# 35	3340	59	Rice Farmers		
Super Wham 30	3350	10	B/H	1,908	57,240
Super Wham 30	3350	15	Amer Whse		
Super Wham 30	3350	59	Rice Farmers		
Super Wham 30	3350	86	Odom	1,100	33,000
Super Wham 2x2 5	3360	10	B/H		

Shipped from O/S Plant Confit:

	Item No	Location		Containers	Bbl/gals
Super Wham 2x2 5	3060	86	Odum	(186)	(980)
Super wham Bulk	3370	86	Odum		4,544
Stam 36	3420	10	B/H		
Propanex 35's	4310	86	Odum		
Butox 200 Bulk	15200	57	HCC-Cordale		
Butox 175 2x2 5	15240	10	B/H		
Butox 175 2x2.5	15240	20	Gray-Albany	324	1,620
Butox 175 2x2 5	15240	21	Gray-Ashburn	288	1,440
Butox 175 2x2.5	15240	30	AWS		
Butox 175 2x2.5	15240	57	HCC-Cordale		
Butox 175 4x1	15260	10	B/H		
Butox 175 4x1	15260	20	Gray-Albany	216	864
Butox 175 4x1	15260	21	Gray-Ashburn	828	3,312
Butox 175 4x1	15260	30	AWS		
Butox 175 4x1	15260	57	HCC-Cordale		
Butox 200 2x2.5	15540	10	B/H	72	360
Butox 200 2x2.5	15540	15	American W/H		
Butox 200 2x2.5	15540	20	Gray-Albany		
Butox 200 2x2.5	15540	21	Gray-Ashburn	108	540
Butox 200 2x2 5	15540	30	AWS	72	360
Butox 200 2x2 5	15540	35	Robertson	360	1,800
Butox 200 2x2.5	15540	57	HCC-Cordale	216	1,080
Butox 200 4x1	15560	10	B/H		
Butox 200 4x1	15560	15	American W/H		
Butox 200 4x1	15560	20	Gray-Albany		
Butox 200 4x1	15560	21	Gray-Ashburn	180	720
Butox 200 4x1	15560	30	AWS	36	144
Butox 200 4x1	15560	35	Robertson		
Butox 200 4x1	15560	57	HCC-Cordale		
Butox 7500 10x2 33	15580	10	B/H		
Butox 7500 10x2 33	15580	15	American W/H		
Butox 7500 10x2 33	15580	20	Gray-Albany		
Butox 7500 10x2 33	15580	21	Gray-Ashburn	86	2,237
Butox 7500 10x2 33	15580	86	Odum		
Pluck 2x2 5	15700	10	B/H		
Pluck 2x2.5	15700	20	Gray-Albany		
Pluck 2x2.5	15700	78	Odum-Pachuta		
Pluck 30	15730	10	B/H		
Pluck 30	15730	78	Odum-Pachuta		
Ethephon	15740	78	Odum-Pachuta		
Ethephon	15740	21	Gray-Ashburn		

Transfers:	Item No	From		To		Cases/Drums	Gals/Lbs
DCA	3020	4	PR	97	In Trans		42,218
DCA	3020	97	In Trans	4	PR		386,032
Duron	3030	4	PR	10	B/H		
Duron	3030	4	PR	86	Odum		
Duron	3030	10	B/H	4	PR		
Duron	3030	10	B/H	86	Odum		
Duron	3030	86	Odum	78	Odum-Pachuta		
Duron	3030	97	In Trans	52	Gulf States		
Flake Tech	3050	4	PR	10	B/H		
Flake Tech	3050	4	PR	58	HCC-W/H		
Flake Tech	3050	4	PR	78	Pachuta		12,000
Flake Tech	3050	4	PR	86	Odum		99,000
Flake Tech	3050	10	B/H	4	PR		
Flake Tech	3050	10	B/H	86	Odum		
Flake Tech	3050	10	B/H	58	HCC-W/H		
Flake Tech	3050	10	B/H	78	Pachuta		
Flake Tech	3050	86	Odum	10	B/H		
Flake Tech	3050	86	Odum	78	Odum-Pachuta		
Flake Tech 25MG	3060	86	Odum	4	PR		
Flake Tech 25MG	3060	86	Odum	78	Odum-Pachuta		
Flake Tech 25MG	3060	4	PR	86	Odum		

transfers Cont'd:	Item No	From	To	Cases/Drums	Gals/Lbs
uron Col 224 Kg	3070	86 Odom	78 Odom-Pachuta		
andil 200L	3140	78 Odom-Pachuta	86 Odom		
vhm 2x2 5	3180	10 B/H	4 Pt		
vhm 2x2 5	3180	10 B/H	86 Odom Ind		
vhm 2x2 5	3180	86 Odom Ind	4 Pt		
vhm 2x2 5	3180	86 Odom Ind	10 B/H		
# 20L	3220	25 Platte	4 Pt		
# 20L	3220	4 Pt	25 Platte		
Vham 30	3240	4 Pt	86 Odom		
Vham 30	3240	4 Pt	10 B/H		
Vham 30	3240	10 B/H	59 Rice Farmers		
Vham 30	3240	10 B/H	86 Odom	300	9,000
Vham 30	3240	10 B/H	88 American Rice		
Vham 30	3240	59 Rice Farmers	10 B/H		
Vham 30	3240	86 Odom Ind	4 Pt		
Vham 30	3240	86 Odom Ind	10 B/H		
Vham 30	3240	86 Odom Ind	59 Rice Farmers		
Vham 30	3240	86 Odom Ind	86 Amer Rice		
Vham 30	3240	88 Amer Rice	10 B/H		
Vham 5	3260	4 Pt	88 Odom		
Vham 5	3260	4 Pt	10 B/H		
Vham 5	3260	10 B/H	4 Pt		
Vham 5	3260	10 B/H	86 Odom Ind		
Vham 5	3260	86 Odom Ind	88 American Rice		
Vham 5	3260	86 Odom Ind	10 B/H		
Vham 5	3260	86 Odom Ind	4 Pt		
Vham 5	3260	88 American Rice	10 B/H		
# 35's	3340	4 Pt	10 B/H		
# 35's	3340	4 Pt	15 American		
# 35's	3340	4 Pt	59 Rice Farmers		
# 35's	3340	10 B/H	4 Pt		
# 35's	3340	10 B/H	15 American		
# 35's	3340	15 American	4 Pt		
# 35's	3340	59 Rice Farmers	4 Pt		
# 35's	3340	59 Rice Farmers	10 B/H		
# 35's	3340	88 American Rice	4 Pt		
Super Vham 30	3350	4 Pt	10 B/H		
Super Vham 30	3350	10 B/H	15 Amer Whse		
Super Vham 30	3350	10 B/H	59 Rice Farmers		
Super Vham 30	3350	10 B/H	86 Odom	1,159	34,770
Super Vham 30	3350	15 Amer Whse	86 Odom		
Super Vham 30	3350	15 Amer Whse	10 B/H		
Super Vham 30	3350	59 Rice Farmers	10 B/H		
Super Vham 30	3350	86 Odom Ind	4 Pt		
Super Vham 30	3350	86 Odom Ind	10 B/H	1,300	38,000
Super Vham 30	3350	86 Odom Ind	15 Amer Whse		
Super Vham 30	3350	86 Odom Ind	59 Rice Farmers		
Super Vham 2x2.5	3360	4 Pt	10 B/H		
Super Vham 2x2 5	3360	4 Pt	86 Odom Ind		
Super Vham 2x2 5	3360	10 B/H	4 Pt		
Super Vham 2x2.5	3360	10 B/H	86 Odom Ind		
Super Vham 2x2 5	3360	78 Odom-Pachuta	86 Odom Ind		
Super Vham 2x2.5	3360	86 Odom Ind	4 Pt		
Super Vham 2x2.5	3360	86 Odom Ind	10 B/H		
Super Vham 2x2.5	3360	86 Odom Ind	78 Pachuta		
Stam 35	3420	4 Pt	10 B/H		
Stam 35	3420	10 B/H	4 Pt		
Butox 200 Bulk	15200	97 In Transit	57 HCC Cordale		
Butox 175 2x2 5	15240	11 Cascio	10 B/H		
Butox 175 2x2.5	15240	21 Gray-Ashburn	10 B/H		
Butox 175 2x2.5	15240	21 Gray-Ashburn	20 Gray-Albany	504	2,520
Butox 175 2x2 5	15240	21 Gray-Ashburn	57 HCC Cordale		
Butox 175 2x2.5	15240	21 Gray-Ashburn	30 AWS		
Butox 175 2x2.5	15240	57 HCC-Cordale	10 B/H		

Transfers Cont'd:	Item No	From	To	Cases/Drums	Gals/Lbs
Butox 175 2x2.5	15240	57 HCC-Cordale	20 Gray-Albany		
Butox 175 2x2.5	15240	57 HCC-Cordale	21 Gray-Ashburn		
Butox 175 2x2.5	15240	57 HCC-Cordale	30 AWS		
Butox 175 4x1	15260	10 B/H	4 Pt		
Butox 175 4x1	15260	10 B/H	21 Gray-Ashburn		
Butox 175 4x1	15260	20 Gray-Albany	10 B/H		
Butox 175 4x1	15260	20 Gray-Albany	21 Gray-Ashburn		
Butox 175 4x1	15260	20 Gray-Albany	30 AWS		
Butox 175 4x1	15260	21 Gray-Ashburn	10 B/H		
Butox 175 4x1	15260	21 Gray-Ashburn	11 Cascio	360	1,440
Butox 175 4x1	15260	21 Gray-Ashburn	20 Gray-Albany	360	1,440
Butox 175 4x1	15260	21 Gray-Ashburn	30 AWS		
Butox 175 4x1	15260	21 Gray-Ashburn	57 HCC-Cordale		
Butox 175 4x1	15260	30 AWS	20 Gray-Albany		
Butox 175 4x1	15260	57 HCC-Cordale	10 B/H		
Butox 175 4x1	15260	57 HCC-Cordale	20 Gray-Albany	1,205	4,820
Butox 175 4x1	15260	57 HCC-Cordale	21 Gray-Ashburn		
Butox 175 4x1	15260	57 HCC-Cordale	30 AWS		
Butox 200 2x2.5	15540	10 B/H	15 American		
Butox 200 2x2.5	15540	10 B/H	35 Robertson		
Butox 200 2x2.5	15540	10 B/H	57 HCC-Cordale		
Butox 200 2x2.5	15540	11 Cascio	10 B/H		
Butox 200 2x2.5	15540	11 Cascio	30 AWS		
Butox 200 2x2.5	15540	11 Cascio	57 HCC-Cordale		
Butox 200 2x2.5	15540	15 American	57 HCC		
Butox 200 2x2.5	15540	20 Gray-Albany	4 Pt		
Butox 200 2x2.5	15540	20 Gray-Albany	15 American		
Butox 200 2x2.5	15540	20 Gray-Albany	35 Robertson		
Butox 200 2x2.5	15540	21 Gray-Ashburn	15 American		
Butox 200 2x2.5	15540	21 Gray-Ashburn	30 AWS		
Butox 200 2x2.5	15540	21 Gray-Ashburn	35 Robertson		
Butox 200 2x2.5	15540	21 Gray-Ashburn	15 American		
Butox 200 2x2.5	15540	30 AWS	15 American		
Butox 200 2x2.5	15540	35 Robertson	15 American		
Butox 200 2x2.5	15540	57 HCC-Cordale	10 B/H		
Butox 200 2x2.5	15540	57 HCC-Cordale	15 American		
Butox 200 2x2.5	15540	57 HCC-Cordale	20 Gray-Albany		
Butox 200 2x2.5	15540	57 HCC-Cordale	21 Gray-Ashburn	876	4,380
Butox 200 2x2.5	15540	57 HCC-Cordale	30 AWS	792	3,960
Butox 200 2x2.5	15540	57 HCC-Cordale	35 Robertson	792	3,960
Butox 200 4x1	15560	11 Cascio	10 B/H		
Butox 200 4x1	15560	11 Cascio	35 Robertson		
Butox 200 4x1	15560	15 Amer Wise	35 Robertson		
Butox 200 4x1	15560	20 Gray-Albany	30 AWS		
Butox 200 4x1	15560	20 Gray-Albany	35 Robertson		
Butox 200 4x1	15560	21 Gray-Ashburn	30 AWS		
Butox 200 4x1	15560	57 HCC-Cordale	20 Gray-Albany		
Butox 200 4x1	15560	57 HCC-Cordale	21 Gray-Ashburn		
Butox 200 4x1	15560	57 HCC-Cordale	35 Robertson		
Butox 7500 DF 10x2.33	15580	10 B/H	15 American		
Butox 7500 DF 10x2.33	15580	15 American	10 B/H		
Butox 7500 DF 10x2.33	15580	88 Odom	10 B/H		
Butox 7500 DF 10x2.33	15580	88 Odom	21 Gray-Ashburn		
Elthephon	15740	97 In Transit	78 Odom-Pachuta		
Tromethamine 25 Kg	17120	10 B/H	4 Pt		
OCPI	40150	52 Gulf States	4 Pt		43,541
OCPI	40150	87 In-Transit	52 Gulf States		
OCPI	40150	97 In-Transit	4 Pt		
Isophorone	40500	88 Odom	78 Odom-Pachuta		
Amul Emulsifier	40800	88 Odom	78 Odom-Pachuta		
Mt 55's	42300	88 Odom	78 Odom-Pachuta		
2,4 D-B Acid	41550	10 B/H	57 HCC-Cordale		
2,4 D-B Acid	41550	20 Gray-Albany	57 HCC-Cordale		
2,4 D-B Acid	41550	20 Gray-Albany	88 Odom		

Transfers Conf'd:	Item No	From	To	Cases/Drums	Gals/Lbs
2,4 D-B Acid	41550	21 Gray-Ashburn	57 HCC-Cordale		
2,4 D-B Acid	41550	86 Odom	10 BAH		
Ht Sil	41500	86 Odom	10 BAH		
Stepwet	41810	86 Odom	10 BAH		
Com'l Clay	41620	86 Odom	10 BAH		
Ethephon	41680	4 Plt	86 Odom-Waynesboro		
Soprophor	41690	78 Pachuta	86 Odom-Waynesboro		
Nitromethane	42680	10 BAH	4 Plt		
1 Gal jug mt	44100	20 Gray-Albany	57 HCC-Cordale		
2.5 Gal jug mt	44200	57 HCC-Cordale	78 Odom-Pachuta		
2.5 Gal jug mt	44200	78 Odom-Pachuta	86 Odom-Waynesboro		
2.5 Gal jug mt	44200	86 Odom	78 Odom-Pachuta		
Arquar 2C75	45120	86 Odom	78 Odom-Pachuta		
Irgalite Blue Dye	45130	86 Odom	78 Odom-Pachuta		
55 Gal Mt	45150	86 Odom	78 Odom-Pachuta		
Butachlor	45200	86 Odom	78 Odom-Pachuta		

Raw Materials Received:	Item No	Lbs		Item No	Gals/Lbs
OCA	3020		Cordale/Gray		
Flake Tech	3050				
P Acid	40200	488,210	60 % DMA	41580	
P Arthy	40300	177,240	Citric Acid	41590	
M O	40400	582,671	2,4 D-B Acid	41550	
Isoph/Mibk	41080	459,780	Jugs-1 gal plastic	44100	10,752
Isoph	40500	220,640	Jugs-2.5 gal Plas	44200	6,680
Emul	40600	309,780			
Aromato B	40800	44,200	Odom-Waynesboro		
Annul	40900	44,460	Nadex	41610	
Mibk	41300		Steparse	41600	
Ethephon	41680		Glycerins	41480	
MCPA-IOE	40830		Alfonac	41490	
55 Crystal Litho	42550		HtSil	41500	
55 mts Black	42300	1,036	Poly O	41470	
35 mts Plastic	42220	1,550	Monwet	41460	10,000
35 mts Plastic	42230	3,688	30 mts	42100	2,520
Cone Blend			2.5 gal jugs	44200	
Stepbac			Citric Acid	41580	
50L mts			Veegum	41570	5,000
ODCB	41000	1,485,570	Continental Clay	41620	
Sulfuric Acid	41010	1,084,060	Kelzan	41510	
Nitric Acid	41020	542,620	DC Antifoam	45140	
Soda Ash	41050	5,400	Arquar	45100	
Ume	41060	30,000	Arquar 2C75	45120	
Caustic 50%	41530		Irgalite	45130	
50% Rayon Caus	45090		Soprophor 4D38	41690	
Cleaning Solution		7,260	55 mts		
Ethephon	41680		Soprophor	41690	
Platinum	41040 (In Transit)		Butachlor	45200	
Catalyst	41070	441	Odom-Pachuta	41680	
Peroxide	41090	20,000	2,4 D-B Acid	41550	
Hydrogen	41030	51,780	2.5 mts	44200	
Methanol	42640		Transit-N O		
			Ethephon	41680	
			Gray Dist		
			2,4 D-B Acid	41550	Ashturn
			2,4 D-B Acid	41550	Albany
			DCPI	40150	
15 gal Mts			TA		
Sum Od	41640	46,960	50% Caustic	45090	
Morpholine	41630		Nitromethane	42680	4,248
55 gal Plastic			Formaldehyde	41540	
5 mts	42000	528	Methanol	42640	13,380
30 mts			Raney Nickel	42690	
20 L mts	42000 Plast		Sulfuric Acid	41010	
2.5 mts	44200		Sodium Bisulfide		
Diuron			DMA	42700	

Heptane 41660
Sulfuric Acid 41520
Anhydrous DMA 41650

Calcium Chloride
Caustic 50% 41530
Sulfuric Acid 41520

Raw Materials Received:

Item No	Lbs	Item No	Gals/Lbs
FMC 5-Nitro		Blackhawk	
Step 3 90800	89,500	Nitromethane	42680
Step 4 90810		2.5 Mt jugs	44200
Step 5 90820			
Chlorine 90720	16,000	Platt	
A Sulfate 90710	24,520	20 m's	42000
G Acid 90700	16,000		
50% Caustic 45090	47,600	Acetone	
20% Oleum 90770	46,540	50% Caustic 41530	272,180
Methanol 90790		Mixed Nitrating A 41700	
Soda Ash 90740		Acetic Anhydride 41710	233,587
Toluene 90760	107,840	98 % Sulfuric Acid 41010	
93% Sulfuric Acid 90750		Ethylene Dichloride 41720	45,440
Mixed Acid 90730		Calcium Chloride R118118	622,517
Spent Acid			
Ethephon		Dupont	
PCL3 46220		2-4 DB Acid 46000	
Ethylene Oxide 46210		Metallicron Meth 46010	
Sulfuric Acid 41010		Acids Propionic 46020	
Anhydrous HCl 46200		Acids Propionic 46030	
Nitrogen		Dichloromethane 98 46040	
E Glycol		Propand Tech 46050	
Acetone		Criston 34 46060	
Calcium Chloride		Criston 160 46070	
		Acetic Benzoic 46080	
		Oxide Mestillico 46090	

Adjustments to Inventory (Per physical; samples; etc.):

Product	Item No	Location	Type Adj	Cases/Drums	Gals/Lbs				
Propand Tech	3000	4 Plant	Adj-Inv		S 1064 1440			S 702 1420	
Flaked Tech	3050	4 Plant	Sample		C 955 7700			S 804 1420	
Flaked Tech	3050	78 Odorn-Pachuta	Adj-Inv		C 164 6835			S 804 1420	
Flaked Tech 25 Kg	3060	4 Plant	Adj-Inv		C 955 7700			S 822 1420	
Flaked Tech 25 Kg	3060	66 Odorn	Adj-Inv		C 3055 5100			S 822 1420	
Duron	3030	66 Odorn	Adj to Physical		C 3057 5100			S 816 1420	
Duron	3030	97 In Transit	Adj Inv To Quantity Shipped to Customer		C 3057 5100			S 816 1420	
Duron Col 224 Kg	3070	66 Odorn	Adj to Physical		C 3058 5100			S 848 1420	
Wham 2x2.5	3180	10 B/H	Adj to Physical		C 3064 5100			S 832 1420	
Wham 2x2.5	3180	66 Odorn	Adj to Physical		C 3064 5100			S 832 1420	
3# 20 L	3220	25 Platt	Leaker		C 3067 5100			S 819 1420	
3# Propand 200L	3250	4 Plant	Label Change		C 3067 5100			S 807 1420	
Wham 5	3260	4 Plant	Adj-Inv		C 3064 5100			S 806 1420	
Wham 5	3260	10 B/H	Adj-Inv		C 3064 5100			S 808 1420	
Wham 5	3260	66 Odorn	Prod Complaint		C 3064 5170			S 808 1420	
Propanex 500	3280	4 Plant	Label Change		C 3042 5100			S 829 1420	
4# Bulk	3300	4 Plant	Adj-Inv		C 3069 5100			S 817 1420	
4# 35	3340	4 Plant	Donation	(1)	C 3069 5100	269 80		S 814 1420	(269 80)
4# 35	3340	15 American	Adj-Inv		C 3069 5100			S 814 1420	
4# 55's	3310	4 Plant	Label Change		C 3069 5100			S 818 1420	
4# 210L	3320	4 Plant	Adj-Inv		C 3069 5100			S 836 1420	
Super Wham 30 g	3350	15 American	Adj-Inv		C 3064 5100			S 831 1420	
Super Wham 30 g	3350	66 Odorn	Adj-Inv		C 3064 5100			S 831 1420	
Prop Tech	3000	4 Plant	Melted F Tech		C 155 6810			S 702 1420	
Flake Tech	3050	4 Plant	Melted F Tech		S 804 1420			C 155 6740	
Flake Tech	3050	66 Odorn-Waynesboro	Adj to Physical		C 164 6835			S 804 1420	
Flaked Tech 25 Kg	3060	66 Odorn-Waynesboro	Adj to Physical		C 3055 5100			S 822 1420	
Wham 2x2.5	3180	10 B/H	Adj to Physical		C 3064 5100			S 832 1420	
Wham 30	3240	10 B/H	Complaint		C 3064 5170			S 805 1420	
Wham 5	3240	66 Odorn-Waynesboro	Adj to Physical		C 964 7700			S 806 1420	

Adjustments to Inventory Conf'd (Per physical; samples; etc.):

Product	Item No	Location	Type Adj	Cases/Drums	Gals/Lbs		
Prop 4# 210 L	3320	4 Plant	Adj-Inv	C 3069	5100	S	836 1420
4# 35's	3340	4 Plant	Adj-Inv	C 3069	5100	S	814 1420
4# 35's	3340	10 B/H	Adj-Inv	C 3069	5100	S	814 1420
Super Wham 30	3350	10 B/H	Adj to Physical	C 3064	5100	S	831 1420
Super Wham 2x2.5	3360	86 Odom-Waynesboro	Adj-Inv	C 984	7700	S	834 1420
Super Wham 2x2.5	3360	10 B/H	Adj-Inv	C 3064	5100	S	834 1420
Super Wham 2x2.5	3360	86 Odom	Samples	C 984	7700	S	834 1420
Propanil 360 210L	10020	4 Plant	Repackage	C 3067	5100	S	826 1420
Propanil 360 200L	10030	4 Plant	Label Change	C 3067	5100	S	825 1420
Butox 200 2x2.5	15540	21 Gray	Adj-Inv	C 430	5100	S	430 1420
Butox 200 4x1	15560	57 HCC Cordata	Adj-Inv	C 430	5100	S	430 1420
Butox 7500 DF 10x2 33	15580	20 Gray-Albany	Samples	C 420	7700	S	850 1420
Butox 7500 DF 10x2 33	15580	10 B/H	Samples	C 420	7700	S	850 1420
Ethephon	15740	21 Gray-Ashburn	Set Up Finish Goods	C 187	6740	S	851 1420
Ethephon	15740	78 Odom-Pachuta	Set Up Finish Goods				
Tromethemine Bulk	17000	4 Plant	Adj-Inv	C 183	6740	S	849 1420
Tromethemine 25 Kg	17120	4 Plant	Adj-Inv	C 3683	5100	S	843 1420
Trometamol 50 Kg	17240	4 Plant	Adj-Inv	C 3683	5100	S	847 1420
Tra Ultra Pure 100Kg	17250	4 Plant	Adj-Inv	C 3683	5100	S	853 1420
DCPI	40150	97 In Transit	Adj to Physical	C 157	5635	S	715 1460
Dowfax	40700	86 Odom-Waynesboro	Adj to Physical	C 164	5850	S	753 1460
Armul Emulsifier	40900	78 Odom-Pachuta	Adj to Physical	C 168	5675	S	720 1460
TM-2 Emulsifier	40910	4 Plant	Adj to Physical	C 151	6400	S	722 1460
Poly Solv	40920	4 Plant	Adj to Physical	C 151	6400	S	723 1460
Soda Ash	41050	4 Plant	Sold	C 151	6400	S	708 1460
Monwet	41460	86 Odom-Waynesboro	Adj to Physical	C 164	5850	S	728 1460
Polyton O	41470	86 Odom-Waynesboro	Adj to Physical	C 164	5850	S	727 1460
Glycerine	41480	86 Odom-Waynesboro	Adj to Physical	C 164	5850	S	728 1460
Atlonc	41490	86 Odom-Waynesboro	Adj to Physical	C 164	5850	S	728 1460
Kelzan	41510	86 Odom-Waynesboro	Adj to Physical	C 164	5850	S	761 1460
50% Caustic	41530	4 Plant	Adj Inv	C 151	6400	S	763 1460
Formaldehyde	41540	4 Plant	Used out of Vinnings Stock	S 8900	1230	S	764 1460
2,4 D-B Acid	41550	86 Odom-Waynesboro	Adj to Physical	C 410	7700	S	765 1460
Veequan	41570	86 Odom-Waynesboro	Adj to Physical	C 164	5850	S	731 1460
60% DMA	41580	57 HCC-Cordata	Adj to Physical	C 410	5700	S	768 1460
Citric Acid	41590	86 Odom-Waynesboro	Adj to Physical	C 164	5850	S	767 1460
Morphotone	41630	4 Plant	Adj-Water Treatment	C 151	6400	S	768 1460
Ethephon	41680	21 Gray-Ashburn	Set Up Finish Good			S	791 1460
Ethephon	41680	78 Odom-Pachuta	Set Up Finish Good	C 187	5910	S	791 1460
Ethephon	41680	86 Odom-Waynesboro	Adj-Inv	C 196	5710	S	791 1460
Soprophor	41690	86 Odom-Waynesboro	Samples	C 164	5850	S	808 1460
Drums 30 plastic	42100	86 Odom-Waynesboro	Adj to Physical	C 164	5870	S	752 1460
35 mls	42210	4 Plant	Adj-Inv	C 1069	5890	S	738 1460
55 ml black	42300	78 Odom-Pachuta	Adj to Physical	C 1058	5890	S	742 1460
55 ml Crystal	42550	4 Plant	Adj-Inv	S 4	1230	S	756 1460
Methanol	42640	4 Plant	Adj-Inv	C 151	6400	S	735 1460
Hcl	42670	4 Plant	Adj-Inv	C 151	6400	S	758 1460
Sodium Hypo	42610	4 Plant	Sent to Ponds	C 151	6400	S	789 1460
Hydroxamine Sulfate	42650	4 Plant	Adj to Physical	C 151	6400	S	736 1460
Jugs 1	44100	57 HCC-Cordata	Adj-Inv	C 430	5870	S	749 1460
Jugs 2 5	44200	86 Odom-Waynesboro	Adj to Physical	C 164	5870	S	759 1460
Jugs 2 5	44200	78 Odom-Pachuta	Adj to Physical	C 164	5870	S	759 1460
Antifoam AF 1500	45000	4 Plant	Transfer to Vining Stock	S 8900	1230	S	770 1460
DMPA	45020	4 Plant	Transfer to Vining Stock	S 8900	1230	S	772 1460
GMS	45030	4 Plant	Used out of Vinnings Stock	S 8900	1230	S	773 1460
Metaure T-1	45040	4 Plant	Transfer to Cedar Stock	S 8900	1230	S	774 1460
20% Rayon Caustic	45080	4 Plant	Transfer to Cedar Stock	S 8900	1230	S	778 1460
50% Rayon Caustic	45090	4 Plant	Used In Ponds	C 2251	6400	S	782 1460
50% Rayon Caustic	45090	4 Plant	Adj to Physical	C 151	6400	S	782 1460
Arquad	45100	86 Odom-Waynesboro	Adj to Physical	C 158	5850	S	781 1460
Arquar	45120	86 Odom-Waynesboro	Adj to Physical	C 158	5850	S	783 1460
Ingatite Blue	45130	86 Odom-Waynesboro	Adj to Physical	C 158	5850	S	784 1460
DC 1500 Antifoam	45140	86 Odom-Waynesboro	Samples	C 164	5850	S	785 1460
55 ml	45150	86 Odom-Waynesboro	Adj to Physical	C 1058	5890	S	786 1460
Cans 5 gal mls	42000	4 Plant	Adj to Physical	C 151	6400	S	739 1460

Misc Activity:

DCA Shipped for conversion to DCPI

DCA 3020 4 Plant

DCPI Conversion

DCPI 40150 97 In-Transit Purchased

DCA 3020 97 In-Transit Used

Platinum Purchased.

Platinum 41040 97 In-Transit

F/G Purchased:

Butox 200 Bulk 15200 97 In-Transit Purchased

Duron 3030 97 In-Transit Purchased

DCA 3020 97 In-Transit Purchased

DCA 3020 97 In-Transit Used

DCA 3020 97 In-Transit Sold

DCA Returned to Westrade

DCA 3020 4 Plant Purchased

DCA 3020 97 In Transit Purchased from Bayer

Flake Tech 3050 4 Plant Purchased

F/G Purchased.

Ethephon 15740 97 In-Transit Purchased

F/G Purchased:

Tms Ultr Pure 100 Kg 17250 4 Plant Purchased

Pure Tms Hol 100 Kg 17260 4 Plant Purchased

OCCB Purchased 41000 97 In Transit

OCCB Used 41000 97 In Transit

Cone Solvents

Isophorone Purchased 40500 32 Cone Solvents Purchased

Lbs/Gls

Qty

93,255

184,940

175,940

S 2 1440

S 2 1440

S 430 1420

S 816 1420

C 157 5910

S 710 1420

S 710 1420

S 804 1420

S 851 1420

S 853 1420

S 855 1420

S 2 1440

S 715 1460

S 701 1420

C 430 6740

C 157 6740

S 701 1420

C 153 6740

C 153 6740

C 155 6740

C 187 6740

C 181 6740

C 181 6740

S 703 1460

241,530 45 C 157 6740 (241,530 45)

C/DAR - WEST HELENA
Production & Sales Units
5/31/88

C McGee
E White
B. Christian

P Fields
File Copy

13 of 17

	Item No	PRODUCE		Prod No	SOLD		Prod No	Year-To-Date Contracts				
		Drums	lbs/gls		Drums	lbs/gls						
Acfluorfen 100% AI	5120		218,340	88		218,340	583	881,904				
BFG	5250			74			578					
FMC 5-Nitro	5280		30,813	70		30,813	580	95,113				
TA	17000		23,720	87					C 3683	5100	8,157 78	S 837 1420
TA 25 Kg	17020											S 842 1420
Pure Tromethamine 25Kg	17120	(67)	(3,693)		40	2,205						S 843 1420
Pure Tromethamine 50Kg	17230											S 848 1420
Tromethamine Total						2,205	588		C 3681	5100		S 845 1420
Trometamol 25 Kg	17220											S 847 1420
Trometamol 50 Kg	17240											S 853 1420
Tns Ultra Pure 100 Kg	17250											S 855 1420
Pure Tns Hcl 100 Kg	17260											
Trometamol Total				85			581		C 3054	5100	168,556 20	
P Tech-Domestic	3000		1,882,839	20		155,660	554		C 3040	5100		
P Tech-Export						155,660	561				S 702 1420	(168,556 20)
P Tech Total									C 3053	5100		
DCA-Domestic	3020		1,208,684	10			553		C 3052	5100		
DCA-Export							552				S 701 1420	
DCA Total									C 3057	5100	353,423 63	(353,423 63)
Duron	3030		127,800	11		136,457	557		C 3058	5100		S 816 1420
Duron Col 248 Kg	3040											S 844 1420
Duron Col 224 Kg	3070								C 3058	5100		S 848 1420
Total Duron Col				12			558					
Flack Tech 25 Kg-Export	3060								C 3055	5100		S 822 1420
Flaked Tech-Export									C 3055	5100		S 804 1420
Total Flakes Tech-Export							582					
Flack Tech 25 Kg-Domestic	3060	200	11,020		200	11,020			C 3055	5100	(702,024 40)	S 822 1420
Flaked Tech-Domestic	3060		145,500	21		(657,000)						S 804 1420
Total Flakes Tech-Domestic						(645,980)	555					716,130 00
Flake Tech Total						(645,980)						
Propanil 360 200L	10030								C 3067	5100	285,018 53	S 825 1420
Propanil 360 35 gl	10010											S 838 1420
Propanil 360 210L	10020											S 828 1420
Supernox 360 200L	10040											S 830 1420
3# bulk	3200		29,789	23								S 802 1420
3# 50 L	3180											S 854 1420
3# 20L	3220	180	1,004		961	5,078						S 819 1420
3# 200L	3250	580	30,647		829	33,236						S 807 1420
3# 55	3210	61	3,355		61	3,355						S 806 1420
3# Total						41,669	567					
Wham 2x2 5-Domestic	3180	1	5						C 3064	5100	844,058 34	S 832 1420
Wham 5-Domestic	3260											S 808 1420
Wham 100L	3230											
Wham 30-Domestic	3240	723	21,690		503	15,090						S 805 1420
Super Wham Bulk	3370		4,544			4,544						S 858 1420
Super Wham 2x2.5-Domest	3360	1	5		(185)	(980)						S 834 1420
Super Wham 30-Domestic	3350	2,240	67,200		3,008	90,240						S 831 1420
Wham Dom Sub-Total			93,444	25		108,894	564					
Bandit 200L	3140								C 3088	5100		S 820 1420
Bandit Total				27			568					
Stam bulk	3400		133,808	32		84,368						S 811 1420
Stam 35	3420	1,431	50,085		1,430	50,050			C 3072	5100	1,187,047 46	S 813 1420
Stam Total						144,418	572					

ADEQ0010817

	Item No	PRODUCE		Prod No	SOLD		Prod No
		Drums	lbs/gls		Drums	lbs/gls	
4# bulk	3300		209,548	24		28,912	
Propanex 500 55	3280						
4# 20 L	3280	180	1,003		180	1,003	
4# 55	3310	413	22,715		414	22,770	
4# 210 L	3320						
4# 200 L	3330	118	6,235		215	11,381	
4# 35	3340	4,089	143,115		4,117	144,085	
Propanex 35	4310						
Supernox 480 200L	10050						
Prop 4# Domestic Sales						208,141	569
Butoxone 175 4x1	15260				1,044	4,176	
Butoxone 175 2x2 5	15240	383	1,915		612	3,060	
175 Total			1,915	51		7,236	591
Butoxone 200 2x2 5	15340	1,785	8,925		828	4,140	
Butoxone 200 4x1	15560				218	864	
200 Total			8,925	52		5,004	594
Ethephon 100% AI	15740			90			595
Butox 7500 10x2.33	15580			53	98	960	592
KVH						1,287,792	101
Total							

C 3069	5100	1,702,878 30	S 817 1420	(218,863.84)
			S 829 1420	
			S 812 1420	(8,308 50)
			S 818 1420	(188,535 60)
			S 836 1420	
			S 839 1420	(94,085 77)
			S 814 1420	(1,183,108 60)
			S 814 1420	
			S 835 1420	
C 410	5100	88,423 92	S 410 1420	(88,423 92)
C 430	5100	88,454.72	S 430 1420	(88,454.72)
C 3887	5100		S 851 1420	
C 420	5100	13,104 00	S 850 1420	(13,104.00)
		4,025,098 46		(4,025,098 46)

Item No	Unit	Per Unit	
ropani 3# bulk	3200	gls	6.43
ropani 3# 55 gal	3210	gls	7.08
ropani 3# 20L	3220	gls	7.08
ropani 3# 20L	3230	gls	7.79
ropani 3# 200L	3240	gls	7.79
ropani 3# 200L	3250	gls	7.08
ropani 3# 200L	3260	gls	7.79
ropani 3# 200L	3270	lbs	1.70
ropani 3# 200L	3280	gls	8.28
ropani 3# 200L	3290	gls	8.28
ropani 3# 200L	3300	gls	7.57
ropani 3# 200L	3310	gls	8.28
ropani 3# 200L	3320	gls	8.28
ropani 3# 200L	3330	gls	8.28
ropani 3# 200L	3340	gls	8.28
ropani 3# 200L	3350	gls	7.79
ropani 3# 200L	3360	gls	7.79
ropani 3# 200L	3370	gls	6.88
ropani 3# 200L	3400	gls	7.97
ropani 3# 200L	3420	gls	8.69
ropani 3# 200L	3430	gls	11.65
ropani 3# 200L	4310	gls	8.28
ropani 3# 200L	5340	lbs	3.70
ropani 3# 200L	10010	gls	7.08
ropani 3# 200L	10020	gls	7.08
ropani 3# 200L	10030	gls	7.08
ropani 3# 200L	10040	gls	7.08
ropani 3# 200L	10050	gls	8.28
ropani 3# 200L	15200	gls	10.25
ropani 3# 200L	15240/15260	gls	12.22
ropani 3# 200L	5530/15540/1556	gls	13.68
ropani 3# 200L	15580	Bag	13.65
ropani 3# 200L	15700	gls	22.87
ropani 3# 200L	15710	gls	22.87
ropani 3# 200L	15720	gls	23.11
ropani 3# 200L	15730	gls	22.87
ropani 3# 200L	15740	lbs	1.24
ropani 3# 200L	17000	lbs	3.70
ropani 3# 200L	17020	lbs	3.70
ropani 3# 200L	17120	lbs	3.70
ropani 3# 200L	17220	lbs	8.39
ropani 3# 200L	17230	lbs	3.70
ropani 3# 200L	17240	lbs	8.39
ropani 3# 200L	17250	lbs	8.22
ropani 3# 200L	17260	lbs	8.22

Material Standard	Item No	Unit	Per Unit
roduct	40100	lbs	1.05
CA	40150	lbs	2.38
CPI	40200	lbs	30
Acid	40300	lbs	82
Anhydr	40400	lbs	58
IO	40500	lbs	.72
isophor	40600	lbs	70
mul	40700	lbs	7.52
owfax 382	40800	lbs	17
em 500	40900	lbs	.67
mul	40910	lbs	1.65
M-2 Emulsifier	40920	lbs	.71
oxySolv	40930	lbs	1.78
ICPA-IOE	41000	lbs	37
DCB	41010	lbs	04
sulfuric Acid	41020	lbs	.16
trnc Acid	41030	lbs	1.13
ydrogen	41040	tr ocs	393.00
lstrum	41050	lbs	13
oda Ash	41060	lbs	07
me	41070	lbs	86.00
tal Cat	41080	lbs	64
isoph/Mibk	41090	lbs	34
ydrogen Peroxide	41200	lbs	19
ylene (Cedar)	41300	lbs	47
libk	41450	lbs	1.37
angel	41460	lbs	1.08
lorawet	41470	lbs	62
oxyfon	41480	lbs	60
lycer	41490	lbs	78
ftonic	41500	lbs	83
Si	41510	lbs	5.30
etzan	41520	lbs	04
sulfuric Acid 93%	41530	lbs	08
aushtc 50%	41540	lbs	11
ormaldehyde	41550	lbs	4.68
.4 D-B Acid	41560	lbs	28
arbon Bisulfide	41570	lbs	1.85
ee gum	41580	lbs	60
0% DMA	41590	lbs	82
zinc Acid	41600	lbs	1.27
rep-sperse DF 200	41610	lbs	2.48
repwet DF 95	41620	lbs	08
ontmental Clay	41630	lbs	1.06
orphosine	41640	lbs	16
um 7N Oil	41650	lbs	64
anhydrous DMA	41660	lbs	.21
igh Clarity Heptane	41670	lbs	3.75
technical Carbonyl	41680	lbs	3.37
3hephon	41690	lbs	1.87
isoprophor 4d384	41700	lbs	11
Acid Nitrating Acid	41710	lbs	42
oetic Anhydride	41720	lbs	22
ethylene Dichloride	42000	ea	3.95
gal/20 L Pts	42100	ea	15.85
0 Mts	42200	ea	17.90
lam 35	42210	ea	19.50
5 mts Plastic/Stam	42220	ea	17.78
5 mts Plastic/Prop	42230	ea	18.50
5 mts	42300	ea	22.05
5 mts Plastic	42300	ea	22.50
5 mts Crystal Litho	42550	ea	21.60
ATPO Drums	42600	ea	25.55
Sodium Hypo	42610	lbs	.08

Product	Item No	Unit	Per Unit
caustic 30%	42620	lbs	07
lethal Mercapton	42630	lbs	78
lethanol 99%	42640	lbs	.13
hydroxamine Sulfate	42650	lbs	1.00
caustic 17%	42660	lbs	03
hydrochloric Acid	42670	lbs	05
nitromethane 99.5%	42680	lbs	1.38
nickel Catalyst	42690	lbs	7.83
MA 40% Solution	42700	lbs	.47
napalm	44000	ea	2.88
ugs-1 Gal Plastic	44100	ea	.43
ugs-2 5 Gal Plastic	44200	ea	1.36
ntifoam AF 9000	45000	lbs	9.60
cetone	45010	lbs	.35
emethylolpropionic	45020	lbs	2.83
hyperl Monosterate	45030	lbs	.71
letacure T-1 Catalyst	45040	lbs	12.26
lethylmethanolamine	45050	lbs	2.15
roxel GXL Blockde	45060	lbs	5.20
oulene Diisocyanate	45070	lbs	1.33
0% Rayon Grade Caustic	45080	lbs	.11
0% Rayon Grade Caustic	45090	lbs	.06
quar 16/28	45100	lbs	1.15
quar 2C75	45120	lbs	1.85
galite Blue dye	45130	lbs	13.55
IC 1500 Antifoam	45140	lbs	5.97
trum 55 gal Diuron Col	45150	ea	44.95
utachlor	45200	lbs	2.35
odium Cyanide	45300	lbs	.80
EAB	45310	lbs	3.90
enneco 500/100	45320	lbs	.18
6% Hcl	45330	lbs	.10
oluene	45340	lbs	.15
lock Salt	45350	lbs	.19
honyl Chloride	45360	lbs	0.70
MF	45370	lbs	0.85
ranular Salt	45380	lbs	0.12
5 ml Drums (Cyper)	45390	lbs	29.50
-4 DB Acid 95%	46000	Kg	2.55
letsulfuron Methyl 90%	46010	Kg	116.50
acido Propionico Puro	46020	Kg	1.27
acido Propionico Usado	46030	Kg	1.27
ictoroanilina 98%	46040	Kg	3.00
ropant Tech	46050	Kg	3.08
riston 34	46060	Kg	2.26
riston 180	46070	Kg	2.46
ocete Banana	46080	Kg	0.11
odo Metilico	46090	Kg	2.08
olueno	46100	Kg	0.79
unhydrous Hydr Chloride	46200	lbs	0.70
thylene Oxide	46210	lbs	0.42
hosphorus Trichloride	46220	lbs	0.42

CENSUS USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICEAPPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION

19 CFR 146.22, 146.32, 146.35-146.37, 146.39-146.41, 146.44, 146.53, 146.66

1. ZONE NO. AND LOCATION (Address)
CEDAR CHEMICAL CORPORATION
FTZ 14B
HIGHWAY 242 SOUTH
WEST HELENA, ARKANSAS 723902. DISTRICT/PORT CODE
20 - 06 MEMPHIS, TENNESSEE3. IMPORTING VESSEL (& FLAG)/OTHER CARRIER
(AM) S/S SEA-LAND PERFORMANCE4. EXPORT DATE
5/24/975. IMPORT DATE
6/9/976. ZONE ADMISSION NO
19910220 107. U.S. PORT OF UNLADING
HOUSTON, TEXAS8. FOREIGN PORT OF LADING
LE HAVRE9. BILL OF LADING/AWB NO
POCLLHB72127887510. INWARD M'FEST
NO N/A11. INBOND CARRIER
TRIPLE E TRANSPORT12. IT NO AND DATE
#313,963,576 6/19/9713. I.T. FROM (Port)
NEW ORLEANS, LA.

14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT?

☐ YES☐ NO

15 NO OF PACKAGES AND COUNTRY OF ORIGIN	16 DESCRIPTION OF MERCHANDISE	17 HTSUS NO	18 QUANTITY (HTSUS)	19 GROSS WEIGHT	20 SEPARATE VALUE & AGGR CHGS
2 C/O FR	(20') TANK CONTAINERS: 3-4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390	2929.10.3000 FTZ 14B IMPORT RELIEF PROGRAM SIGNATURE	39000 Kg	46620 Kg	\$204,750. CIF \$3,581. NDC \$201,169. FOB
21 HARBOR MAINTENANCE FEE (19 CFR 24.24)					\$251.46

22. I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations.

23. I hereby apply for the status designation indicated.

☒ NONPRIVILEGED FOREIGN
(19 CFR 146.42)☐ PRIVILEGED FOREIGN
(19 CFR 146.41)☐ ZONE RESTRICTED
(19 CFR 146.44)☐ DOMESTIC
(19 CFR 146.43)

24. APPLICANT FIRM NAME

CEDAR CHEMICAL CORPORATION

25. BY (Signature)

26. TITLE

27. DATE

F.T.Z. AGREES TO RECEIVE
MERCHANDISE INTO THE ZONE

28. FOR THE FTZ OPERATOR (Signature)

29. TITLE

30. DATE

PERMIT

Permission is hereby granted to
transfer the above merchandise
into the Zone.

31. DISTRICT DIRECTOR OF CUSTOMS. BY (Signature)

32. TITLE

33. DATE

PERMIT

The above merchandise has been
granted the requested status.

34. DISTRICT DIRECTOR OF CUSTOMS BY (Signature)

35. TITLE

36. DATE

37. The goods described herein are authorized to be transferred

☐ without exception☒ except as noted belowPERMIT
TO
TRANSFER

38. CUSTOMS OFFICER AT STATION (Signature)

39. TITLE

40. STATION

41. DATE

42. RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)

43. CARTMAN

44. CHL NO

45. DATE

FTZ
OPERATOR'S
REPORT OF
MERCHANDISE
RECEIVED
AT ZONE

46. To the District Director of Customs. The above merchandise was received at the Zone on the date shown except as noted below

DISCREPANCY OF +/- .002

LTC0457005.4 - ACTUAL DELIVERED WEIGHT OF 43,500 LBS.

LTC0457006.0 - ACTUAL DELIVERED WEIGHT OF 43,500 LBS.

47. FOR THE FTZ OPERATOR (Signature)

48. TITLE

49. DATE

RAW MATERIAL RECEIVING RECORD No 9973

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE <div style="font-size: 1.2em;">10:50</div>	RECEIVED BY <div style="font-family: cursive;">T. Nicholson</div>
---	--

SECTION 1

DATE <div style="font-size: 1.2em;">6-20-97</div>	ORDER NO. <div style="font-size: 1.2em;">n/a</div>	CAR OR TRUCK NO. <div style="font-size: 1.2em;">UTC U457006-0</div>	DECLARED WEIGHT <div style="font-size: 1.2em;">Net n/a 43230</div>
--	---	--	---

SHIPPER <div style="font-family: cursive;">Hilsat</div>	CARRIER <div style="font-family: cursive;">Triple E</div>
--	--

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit #5	40150	DCP1

COMMENTS

Lab Hat C.O.A.

SECTION 2

RECIPIENT <div style="font-family: cursive;">T. Nichols</div>	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
--	--------------------------------------

UNLOADED AT (tank number, unit, warehouse, etc.)

PAP.

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
JH	✓		

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
DAM	X	2	

PLANT WEIGHT <div style="font-size: 1.2em;">NET 42920</div>	UNLOADING TIMES
	<div style="display: flex; justify-content: space-between;"> <div>START TIME <div style="font-size: 1.2em;">20:30 6/25/97</div></div> <div>END TIME <div style="font-size: 1.2em;">23:08 6/25/97</div></div> </div>

COMMENTS

See CONTAINER WAS OPEN & IT WAS EMPTY



WEIGHED ON A FAIRBANKS SCALE

ATCH
457006-0

DATE 6/20/97

CUSTOMER'S NAME Cedar

ADDRESS W H Sless and

COMMODITY shell DCP

CARRIER Triple E

REMARKS

76640 10:51AM JUN 20 97

17180

59460

16540

42920

FAIRBANKS SCALE CAT. 083905

pull cart only

LBS. GROSS

LBS. TARE - DRIVER ON OFF ☒

LBS. NET @ PER LB. PRICE

SHIPPER

WEIGHER

FAIRBANKS SCALE CAT. 083905

WEIGHER

SHIPPER

LBS. NET @ PER LB. PRICE

LBS. TARE - DRIVER ON OFF ☒

LBS. GROSS

REMARKS

33680 09:59AM JUL 01 97

CARRIER TRIPLE E

COMMODITY DEEP residue

ADDRESS ARABIA, LA

CUSTOMER'S NAME Gulf State Marine

DATE 7-1-97

WEIGHED ON A FAIRBANKS SCALE

AB0000018593

BILL OF LADING FOR COMBINED TRANSPORT SHIPMENT OR PORT TO PORT SHIPMENT

Shipper

B/L No:

POCLLHB 721270875

STOLT-NIELSEN S.A. P/C
RHONE POULENC SECTEUR AGRO
14/20 RUE PIERRE BAIZET
B.P. NO 9163

69-263 LYON FRANCE

P&O Nedlloyd

TO THE ORDER OF :
CEDAR CHEMICAL CORPORATION
HWY 242 SOUTH - PO BOX 2749
WEST HELENA AR. 72390
ATTN: BOB CHRISTIAN

Incorporated in The Netherlands as
P&O Nedlloyd B.V.
Boumpste 10 AN-1 XD Rotterdam

Consignee Address: "It is agreed that no responsibility shall attach to the carrier"
GILSCOT GUIDROZ INTERNATIONAL
2815 DIVISION STREET - SUITE 202 -
METAIRIE LA 70002 - U.S.A. -
ATTN: KEICH GUIDROZ TEL: 504867
8897 - FAX: 504887 8898

Place of Receipt

Applicable only when this document is used as
a Combined Transport Bill of Lading

Ocean Vessel

Place of Delivery

Applicable only when this document is used as
a Combined Transport Bill of Lading

SEALAND PERFORMANCE LE HAVRE

NEW ORLEANS

Marks and Nos. Containers Nos.

Number and kind of Packages, description of Goods

Gross Weight (kg)

Measurements (cubm)

UTCJ457005/4

2X20' SHIPPER'S OWNED
TANKCONTAINERS SAID TO

19T650

N.WGT

UTCJ457006/0

CONTAIN BULKS OF :
3,4-DICHLOROPHENYLISOCYANATE
(3,4 D.C.P.I.)-TOXIC LIQUID-
HAZARDOUS CARGO :
CL : 6.1 ONU : 2250 P.G.:II
SECURITY SHEET: 6.1 - 04
M.F.A.G. TABLE : 370

3T800

TARE

19T350

N.WGT

3T820

TARE

39T000

T.NETS

7T620

TARES

46T620

G.WGT

IN CASE OF EMERGENCY CALL
RHONE POULENC / CHEMTREC NO:
PHONE NUMBER: 1800 424 9390

FREIGHT AND THC PREPAID
IN LE HAVRE BY
STOLT-NIELSEN S.A.

2 NO NOTIFY :
STOLT TANKCONTAINERS INC.
15602 JACINTOPORT BLVD.
HOUSTON, TX 77015 - U.S.A.-
ATTN: KEVIN FALLON
TEL: 1 (281) 452-1080

ABOVE PARTICULARS ARE AS DECLARED BY SHIPPER

Total No. of Containers/Packages received by the Carrier

RECEIVED by the Carrier from the Shipper in apparent good order and condition (unless otherwise noted herein) the total number or quantity of Containers or other packages or units indicated in the here opposite entitled "a Total No. of Containers/Packages received by the Carrier" for transport subject to all the terms hereof (UNITED STATES TERMS ON THE REVERSE HEREOF AND THE TERMS OF THE CARRIER'S APPLICABLE TARIFF) from the Place of Receipt to the Port of Loading, whichever is applicable, to the Port of Discharge or the Place of Delivery, whichever is applicable. The original Bill of Lading must be surrendered duly endorsed, on exchange, for the Goods, in accepting this B/L of Lading the Merchant expressly accepts and agrees to all the terms and conditions whether printed or written, or otherwise incorporated by reference into this Bill of Lading by the Merchant.

Freight

Freight and Charges (indicate whether prepaid or collect)

Origin Inland Handling Charge

Origin Terminal Handling Charge

Ocean Freight

Destination Terminal Handling Charge

Destination Inland Handling Charge

Freight payable as

LE HAVRE

Number of Containers/Packages

Place and Date of Issue

LE HAVRE 2 - JUN 1997

IN WITNESS of the contract herein contained the number of
originally stated packages have been issued, one of which being
accomplished the original to be void

For P&O Nedlloyd B.V.
As Carrier

For STOLT-NIELSEN S.A.
As Shipper

RHONE-POULENC AGRO

14-20, RUE PIERRE BAIZET B P 9163
69263 LYON CEDEX 09 - FRANCE
TEL 04 72 85 25 25 FAX 04 72 85 27 88
TLX 310 088 F RHONE
N IDENTIFICATION TVA FR 53 969 503 309

ORIGINAL

INVOICE NO: 70115118 DATED 27.05.1997
31st 1 115 11991

CONSIGNEUR :
SEINE-LOIRE-VAL-DE-LOIRE
STH : 305 CHRISTIAN
447 241 5017
AR 71090 WEST HELENA
UNITED STATES

INVOICÉ :
CEDEX-LOIRE-VAL-DE-LOIRE
STH : 305 CHRISTIAN
447 241 5017
AR 71090 WEST HELENA
UNITED STATES

.....
J F F F : 01 40127492 0010
V A R E : 04050517
M I S S I O N :
T E R M S O F D E L I V E R Y : 11 - COST INC FR 10
T E R M S O F P A Y M E N T : 30 DAYS INVOICE DATE
P A Y M E N T D A T E : 15.05.1997
P A Y M E N T M O D E : TELEGRAPHIC TRANSFER
C U R R E N C Y : USD

LOC : NEW ORLEANS

.....
A P P L I C A T I O N : 18754011
C O U N T E R P A R T I E : 014 0151 0151
M A I N T I E N : 39101 111
I N V O I C E P R I C E : 5 15 USD PER 1 L
M O N T A N T : 244.751.000 USD

SH N° : 29241790

.....
R H O N E P O U L E N C A G R O
S E C R E T A R I A T
C E D E X - L O I R E
S T H : 305
S T H : 305
S T H : 305

FORM NO 30 - 41

244.750.000 USD

à COMPTER : 1 - ART. 262TER 1 DU CODE GENERAL DES IMPOTS

RECEVÉ PAR : 1 - SOCIÉTÉ GÉNÉRALE D'ENTREPRISES
ENTREPRISES : 1 - SOCIÉTÉ GÉNÉRALE D'ENTREPRISES
ENTREPRISES : 1 - SOCIÉTÉ GÉNÉRALE D'ENTREPRISES

RHÔNE-POULENC
SEINE-LOIRE-VAL-DE-LOIRE
14/20 le 15 mai 1997 B P. 9163
69263 LYON CEDEX 09
TEL 04 72 85 25 25 FAX 04 72 85 27 88
SA Capital 1 431 515 000 - RC LYON 8 969 503 309

TOLOCHIMIE

ADRESSER VOTRE CORRESPONDANCE A

TOLOCHIMIE - Impasse PAI AYRÉ
B.P. 1196 - 31037 TOULOUSE CEDEX 1
TÉL. 05 61 31 78 78
TÉLÉCOPIE 05 61 31 78 50

N / REF : MF / ML

DATE 16-Mai-97

CEDAR

COMMANDE
EXPEDITION

N° 201 27462
N° 438
DU 16 Mai 97

CAMION CITERNE
CONTAINER
WAGON

N°
N° UTCU 457 006.0
N°

N° DE LOT DU PRODUIT

B303A/16.5.97.5

N° DE LOT DU CONDITIONNEMENT

(s' il y a lieu)

CERTIFICAT D'ANALYSE DU 3,4-DICHLOROPHENYLISOCYANATE

Nous certifions que le produit ci-dessus a la composition suivante :

M E T H O D E	Détermination	Valeur	Unité	Spécification	Méthode d'analyse Tolochimie
1	aspect	conforme		solide blanc	Visuelle
2	3,4-dichlorophénylisocyanate	99.6	%	> 98.5	To 10.27.88
2	2,3-dichlorophénylisocyanate	0.23	%	pour information	To 10.27.88
	3-chloro+ 4-chlorophénylisocyanate	0	%	pour information	To 10.27.88
2	monochlorobenzène	0.01	%	< 0.2	To 10.27.88
2	semi-lourds	0.15	%	< 0.8	To 10.27.88
autre	0	0	%		To 10.27.88
autre			%		

principe de la méthode:

1	visuelle
2	C.P.G
autre	
autre	

E. Siey

LE RESPONSABLE DU CONTROLE ANALYTIQUE



RHONE-POULENC AGRO

14-20, RUE PIERRE BAIZET B P 9163
69263 LYON CEDEX 09 - FRANCE
TEL 04 72 85 25 25 - FAX 04 72 85 27 99
TLX 310 088 F RHONE

N° IDENTIFICATION TVA - FR 53 999 503 309 INVOICE THIS 6015499 DATED 20.05.1997
1147 : 065 01791

CONSIGNEE: (PTE (AV)
CEDAR CHEMICAL CORPORATION
ATTN: BOB CHRISTIAN
HWY 242 SOUTH
AK 72390 WEST HELENA
UNITED STATES

INVOICED: USCEAR
CEDAR CHEMICAL CORPORATION
ATTN: BOB CHRISTIAN
P.O. BOX 874 2743
AK 72390 WEST HELENA
UNITED STATES

U/RET : 01 1012216270010
Y/RET : 01052377
SHIPPING BY :
TERMS OF DELIVERY : CIF (COST INS FREIGHT)
TERMS OF PAYMENT : 90 DAYS INVOICE DATE
PAYMENT DATE : 21.08.1997
PAYMENT MODE : TELEGRAPHIC TRANSFER
CURRENCY : USD

TO : NEW ORLEANS

PRODUCT CODE : 1457-2011
CUST. MATERIAL NO : 3.4 DCP C100PH
QUANTITY : 132200.00 LB
UNIT PRICE : 5.25 USD PER 1 LB
AMOUNT : 694.050.00 USD

SIN N° : 23291090

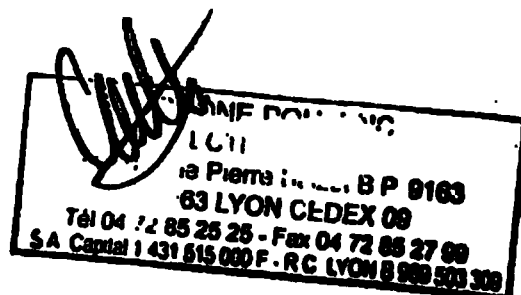
MARKING: RHONE-POULENC AGRO
3.4 DCP
C100PH / 10A
H.W.....
G.W.....
N.W.....

TOTAL TO BE PAID

694.050.00 USD

EXONERATION TVA (PTE 262121 F 1011111 GENERAL DES IMPOTS

TELEGRAPHIC TRANSFER TO SWIFT TO SWIFT GENERAL LYON GRANDES
ENTREPRISES : ACCOUNT NUMBER 200300000
TRF SWIFT : SWIFT SORB FREEVAL LYON ENTREPRISES 02280



CENSUS USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICEAPPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION

19 CFR 146.22, 146.32, 146.35-146.37, 146.39-146.41, 146.44, 146.53, 146.68

1. ZONE NO. AND LOCATION (Address)

FOREIGN TRADE ZONE No. 2
NAPOLEON AVENUE WHARF
NEW ORLEANS, LA.

2. DISTRICT/PORT CODE

20 - 02 NEW ORLEANS, LA.

3. IMPORTING VESSEL (& FLAG)/OTHER CARRIER

(MX) M/V NUEVO LEON V.30W

4. EXPORT DATE

5/17/97

5. IMPORT DATE

6/7/97

6. ZONE ADMISSION NO

23971

7. U.S. PORT OF UNLADING

NEW ORLEANS, LA.

8. FOREIGN PORT OF LADING

LE HAVRE

9. BILL OF LADING/AWB NO.

TEMULHNLN30W0628

10. INWARD M'FEST NO.

N/A

11. INBOND CARRIER

N/A

12. I.T. NO. AND DATE

N/A

13. I.T. FROM (Port)

N/A

14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT?

☐ YES☐ NO

15 NO OF PACKAGES AND COUNTRY OF ORIGIN	16 DESCRIPTION OF MERCHANDISE	17 HTSUS NO.	18 QUANTITY (HTSUS)	19 GROSS WEIGHT	20 SEPARATE VALUE & AGGR CHGS.
7 C/O FR 1	(20') TANK CONTAINERS: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II EMERGENCY TELEPHONE: (800) 424-9390	2929.10.3000	132200 KG	159760 KG	\$694,050.CI \$10,150.NC \$683,900.FC
21 HARBOR MAINTENANCE FEE (19 CFR 24.24) <input type="checkbox"/>					\$854.88

22. I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry in the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations.

23. I hereby apply for the status designation indicated

☒ NONPRIVILEGED FOREIGN
(19 CFR 146.42)☐ PRIVILEGED FOREIGN
(19 CFR 146.41)☐ ZONE RESTRICTED
(19 CFR 146.44)☐ DOMESTIC
(19 CFR 146.43)

24. APPLICANT FIRM NAME

CEDAR CHEMICAL CORPORATION

25. BY (Signature)

PHILBIN, CAZALAS & ST. JOHN INC. Atty in fact

26. TITLE

Atty in fact

27. DATE

6/10/97

F.T.Z. AGREES TO RECEIVE
MERCHANDISE INTO THE ZONE ☒

28. FOR THE F.T.Z. OPERATOR (Signature)

[Signature]

29. TITLE

INSP

30. DATE

6/11/97

PERMIT

Permission is hereby granted to
transfer the above merchandise
into the Zone.

31. DISTRICT DIRECTOR OF CUSTOMS BY (Signature)

[Signature]

32. TITLE

INSP

33. DATE

6/11/97

PERMIT

The above merchandise has been
granted the requested status.

34. DISTRICT DIRECTOR OF CUSTOMS BY (Signature)

[Signature]

35. TITLE

INSP

36. DATE

6/11/97

37. The goods described herein are authorized to be transferred:

☒ without exception☐ except as noted below

PERMIT

TO

TRANSFER

38. CUSTOMS OFFICER AT STATION (Signature)

[Signature]

39. TITLE

[Title]

40. STATION

[Station]

41. DATE

[Date]

42. RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)

[Signature]

43. CARTMAN

GULF STATES CARTAGE

44. CHL NO.

CHL #187

45. DATE

6/10/97

FTZ

OPERATOR'S
REPORT OF

MERCHANDISE

RECEIVED

AT ZONE

46. To the District Director of Customs: The above merchandise was received at the Zone on the date shown except as noted below.

CCR4 197079-6 FR2076 SIDE SIDE DENT

AUDIT INSPECTOR FTZ #2

47. FOR THE FTZ OPERATOR (Signature)

[Signature]

48. TITLE

[Title]

49. DATE

6-13-97

(Paperwork Reduction Act Notice on Reverse)

Customs Form 244 (02-99)

AB0000018593

Approved through 01/31/94, OMB No. 1515-0086

CENSUS USE ONLY		DEPARTMENT OF THE TREASURY UNITED STATES CUSTOMS SERVICE		1. ZONE NO. AND LOCATION (Address) CEDAR CHEMICAL CORPORATION FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, ARKANSAS 72390	
		APPLICATION FOR FOREIGN-TRADE ZONE ADMISSION AND/OR STATUS DESIGNATION		2. DISTRICT/PORT CODE 2006-MEMPHIS, TENNESSEE	
3. IMPORTING VESSEL (& FLAG)/OTHER CARRIER (MX) M/V NUEVO LEON V.30W		4. EXPORT DATE 5/17/97	5. IMPORT DATE 6/7/97	6. ZONE ADMISSION NO.	
7. U.S. PORT OF UNLADING NEW ORLEANS, LA.		8. FOREIGN PORT OF LADING LE HAVRE		9. BILL OF LADING/AWB NO. TEMULHNLN30W0628	10. INWARD MIFEST NO. N/A
11. INBOUND CARRIER TRIPLE E TRANSPORT		12. I.T. NO. AND DATE #313,963,635 6/30/97		13. I.T. FROM (Port) NEW ORLEANS, LA.	
14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					
15. NO. OF PACKAGES AND COUNTRY OF ORIGIN	16. DESCRIPTION OF MERCHANDISE	17. HTSUS NO.	18. QUANTITY (HTSUS)	19. GROSS WEIGHT	20. SEPARATE VALUE & AGGR CHGS.
1	(20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II EMERGENCY TELEPHONE: (800) 424-9390 CONTAINER NUMBER EXFU-130581-1 ZONE-TO-ZONE TRANSFER NPF FTZ #2 ADMISSION No. 23971	2929.10.3000	19500 KG	23500 KG	\$102375. CIF \$1497. NDC \$100878. FOB
21. HARBOR MAINTENANCE FEE (19 CFR 24.24) <input checked="" type="checkbox"/>					
22. I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 146.51, Customs Regulations.					
23. I hereby apply for the status designation indicated: <input checked="" type="checkbox"/> NONPRIVILEGED FOREIGN (19 CFR 146.42) <input type="checkbox"/> PRIVILEGED FOREIGN (19 CFR 146.41) <input type="checkbox"/> ZONE RESTRICTED (19 CFR 146.44) <input type="checkbox"/> DOMESTIC (19 CFR 146.43)					
24. APPLICANT FIRM NAME CEDAR CHEMICAL CORPORATION		25. BY (Signature) <i>Bob Christie</i>		26. TITLE MGR PURCH	
F.T.Z. AGREES TO RECEIVE MERCHANDISE INTO THE ZONE <input checked="" type="checkbox"/>		28. FOR THE F.T.Z. OPERATOR (Signature) <i>Bob Christie</i>		29. TITLE MGR PURCH	
PERMIT	Permission is hereby granted to transfer the above merchandise into the Zone.	31. DISTRICT DIRECTOR OF CUSTOMS BY (Signature) <i>[Signature]</i>		32. TITLE Inspector	
PERMIT	The above merchandise has been granted the requested status.	34. DISTRICT DIRECTOR OF CUSTOMS BY (Signature) <i>[Signature]</i>		35. TITLE Inspector	
37. The goods described herein are authorized to be transferred: <input type="checkbox"/> without exception <input checked="" type="checkbox"/> except as noted below					
PERMIT TO TRANSFER	38. CUSTOMS OFFICER AT STATION (Signature) <i>[Signature]</i>		39. TITLE Inspector		40. STATION 2257A
FTZ OPERATOR'S REPORT OF MERCHANDISE RECEIVED AT ZONE	42. RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)		43. CARTMAN		44. CHL NO. 45. DATE
46. To the District Director of Customs: The above merchandise was received at the Zone on the date shown except as noted below:					
47. FOR THE FTZ OPERATOR (Signature) <i>Bob Christie</i>		48. TITLE MGR PURCHASING		49. DATE 7-16-97	

(Paperwork Reduction Act Notice on Reverse)

Customs Form 214 (02/99)

TOLOCHIMIE

ADRESSER VOTRE CORRESPONDANCE A

TOLOCHIMIE - Impasse PALAYRÉ
B P 1196 - 31037 TOULOUSE CEDEX 1
TÉL. : 05 61 31 78 78
TÉLÉCOPIE 05 61 31 78 50

N / REF : MF /ML

DATE 14-Mai-97

CEDAR

COMMANDE N° 40127462
EXPEDITION N° 296
DU 14 Mai 97

CAMION CITERNE N°
CONTAINER N° EXFU 130581-1
WAGON N°

N° DE LOT DU PRODUIT B303A/14.5.97.5

N° DE LOT DU CONDITIONNEMENT

(s' il y a lieu)

CERTIFICAT D'ANALYSE DU 3,4-DICHLOROPHENYLISOCYANATE (ex 3,4-DCA CEDAR)

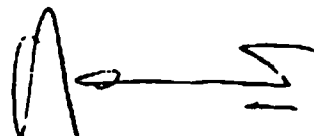
Nous certifions que le produit ci-dessus a la composition suivante :

M E T H O D E	Détermination	Valeur	Unité	Spécification	Méthode d'analyse Tolochimie
1	aspect	conforme		solide blanc	Visuelle
2	3,4-dichlorophénylisocyanate	99.65	%	> 98.5	To 10.27.88
2	2,3-dichlorophénylisocyanate	0.27	%	pour information	To 10.27.88
2	3-chloro + 4-chlorophénylisocyanate	0	%	pour information	To 10.27.88
2	monochlorobenzène	0	%	< 0.2	To 10.27.88
2	semi-lourds	0.02	%	< 0.8	To 10.27.88
autre	isocyanate de chlorotolyle	0.06	%		To 10.27.88
autre			%		

principe de la méthode:

1	visuelle
2	C.P.G
autre	
autre	

LE RESPONSABLE DU CONTROLE ANALYTIQUE



AB0000018635

RHONE-POULENC AGRO

14-20, RUE PIERRE BAIZET B P 9163
69263 LYON CEDEX 09 - FRANCE
TEL 04 72 85 25 25 - FAX 04 72 85 27 89
TUX 310 098 F RHÔNE
N° IDENTIFICATION TVA FR 53 969 503 309

ORIGINAL

INVOICE FOR COLLECTION DATED 27.05.1997
DATE : 27.05.1997

CONSIGNEE:
CLIMA - CHIMIE - LYON
ATTN : 808 CHRISTIAN
RUE 241 SOUTH
AP 72090 WEST HESBIA
UNITED STATES

INVOICEE:
CLIMA - CHIMIE - LYON
ATTN : 808 CHRISTIAN
RUE 241 SOUTH
AP 72090 WEST HESBIA
UNITED STATES

DEBIT : 01 40127412 00
CREDIT : 140565 17
MONTANT HT :
TERMS OF DELIVERY : CIF - 100% HT FREIGHT
TERMS OF PAYMENT : 90 DAYS INVOICE DATE
PAYMENT DATE : 25.08.1997
PAYMENT MODE : TELEGRAPHIC TRANSFER
CURRENCY : USD

EC : NEW ORLEANS

SPOT : 19970001
QUANTITE : 3.4 DLT 100% HT
UNITES : 3900, 100% HT
UNIT PRICE : 5.25 USD 100% HT
TOTAL : 17.75 USD 100% HT

SH 17 : 20201790

RHONE-POULENC AGRO
14-20, RUE PIERRE BAIZET
69263 LYON CEDEX 09
TEL 04 72 85 25 25
FAX 04 72 85 27 89
TUX 310 098 F RHÔNE

04.05.1997 14.05.1997

APPROPRIATION : 14.05.1997 14.05.1997

ENTREPRISE : 14.05.1997 14.05.1997
ENTREPRISE : 14.05.1997 14.05.1997
ENTREPRISE : 14.05.1997 14.05.1997

RHÔNE-POULENC
Si Rhône-POULENC AGRO
14/20 Rue Pierre Baizet B P 9163
69263 LYON CEDEX 09
Tel 04 72 85 25 25 Fax 04 72 85 27 89
SA Capital 1 431 515 000 - RC LYON 8 969 503 309

CENSUS USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICEAPPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION

19 CFR 146.22, 146.32, 146.35-146.37, 146.39-146.41, 146.44, 146.53, 146.66

1. ZONE NO AND LOCATION (Address)
CEDAR CHEMICAL CORPORATION
FTZ 14B
HIGHWAY 242 SOUTH
WEST HELENA, ARKANSAS 723902. DISTRICT/PORT CODE
2006 MEMPHIS, TENNESSEE

3. IMPORTING VESSEL (& FLAG)/OTHER CARRIER

(MX) M/V NUEVO LEON V.30W

4. EXPORT DATE

5/17/97

5. IMPORT DATE

6/7/97

8. ZONE ADMISSION NO.

19970230

7. U.S. PORT OF UNLOADING

NEW ORLEANS, LA.

8. FOREIGN PORT OF LADING

LE HAVRE

9. BILL OF LADING/AWB NO

TEMJLHNLN30W0628

N/A

11. INBOND CARRIER

TRIPLE E TRANSPORT

12. IT NO AND DATE

#313.963.646

6/30/97

13. I.T. FROM (Port)

NEW ORLEANS, LA.

14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT?

☐ YES☐ NO

15 NO OF PACKAGES AND COUNTRY OF ORIGIN	16 DESCRIPTION OF MERCHANDISE	17 HTSUS NO	18 QUANTITY (HTSUS)	19 GROSS WEIGHT	20 SEPARATE VALUE & AGGR CHGS
1 C/O FR	(20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II EMERGENCY TELEPHONE: (800) 424-9390 CONTAINER NUMBER CCRU-197208-4 ZONE-TO-ZONE TRANSFER NPF FTZ #2 ADMISSION No. 23971	2929.10.3000	17750 KG	21640 KG	\$93188. CIF \$1363. NDC \$91825. FOB
21. HARBOR MAINTENANCE FEE (19 CFR 24.24) <input type="checkbox"/>					

22. I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations.

23. I hereby apply for the status designation indicated

☒ NONPRIVILEGED FOREIGN
(19 CFR 146.42)☐ PRIVILEGED FOREIGN
(19 CFR 146.41)☐ ZONE RESTRICTED
(19 CFR 146.44)☐ DOMESTIC
(19 CFR 146.43)

24. APPLICANT FIRM NAME

CEDAR CHEMICAL CORPORATION

25. BY (Signature)

Bob Christen

26. TITLE

Mgr. Purch

27. DATE

7-11-97

F.T.Z. AGREES TO RECEIVE
MERCHANDISE INTO THE ZONE ☐

28. FOR THE F.T.Z. OPERATOR (Signature)

Bob Christen

29. TITLE

Mgr. Purch

30. DATE

7-11-97

PERMIT
Permission is hereby granted to
transfer the above merchandise
into the Zone.

31. DISTRICT DIRECTOR OF CUSTOMS BY (Signature)

32. TITLE

33. DATE

PERMIT
The above merchandise has been
granted the requested status

34. DISTRICT DIRECTOR OF CUSTOMS BY (Signature)

35. TITLE

36. DATE

37. The goods described herein are authorized to be transferred ☐ without exception ☐ except as noted belowPERMIT
TO
TRANSFER

38. CUSTOMS OFFICER AT STATION (Signature)

39. TITLE

40. STATION

41. DATE

42. RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)

43. CARTMAN

44. CHL NO

45. DATE

FTZ
OPERATOR'S
REPORT OF
MERCHANDISE

46. To the District Director of Customs. The above merchandise was received at the Zone on the date shown except as noted below

WEIGHT DISCREPANCY OF +/- .05%
ACTUAL DELIVERED WEIGHT IS 17,845KGRECEIVED
AT ZONE

47. FOR THE F.T.Z. OPERATOR (Signature)

Bob Christen

48. TITLE

Mgr. Purch

49. DATE

7-11-97

(Paperwork Reduction Act Notice on Reverse)

Customs Form 214 (020691)

AB0000018644

CENSUS USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICEAPPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION

19 CFR 148.22, 148.32, 148.35-148.37, 148.39-148.41, 148.44, 148.53, 148.66

1. ZONE NO. AND LOCATION (Address)
CEDAR CHEMICAL CORPORATION
FTZ 14B
HIGHWAY 242 SOUTH
WEST HELENA, ARKANSAS 72390

2. DISTRICT/PORT CODE
2006. MEMPHIS, TENNESSEE

3. IMPORTING VESSEL (& FLAG)/OTHER CARRIER
(MX) M/V. NUEVO LEON V.30N

4. EXPORT DATE
5/17/97

5. IMPORT DATE
6/7/97

6. ZONE ADMISSION NO.
194100310

7. U.S. PORT OF UNLADING
NEW ORLEANS, LA.

8. FOREIGN PORT OF LADING
LE HAVRE

9. BILL OF LADING/AWB NO.
TEMULHNLN30W0628

10. INWARD M/FEST NO.
N/A

11. INBOND CARRIER
TRIPLE E TRANSPORT

12. I.T. NO. AND DATE
#313.963.646 6/30/97

13. I.T. FROM (Port)
NEW ORLEANS, LA.

14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT? ☐ YES ☐ NO

15 NO OF PACKAGES AND COUNTRY OF ORIGIN	16 DESCRIPTION OF MERCHANDISE	17 HTSUS NO.	18 QUANTITY (HTSUS)	19 GROSS WEIGHT	20 SEPARATE VALUE & AGGR CHGS.
1 C/O FR	(20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II EMERGENCY TELEPHONE: (800) 424-9390 CONTAINER NUMBER CCRU-197208-4 ZONE-TO-ZONE TRANSFER NPF FTZ #2 ADMISSION No. 23971	2929.10.3000	17750 KG	21640 KG	\$93188. CIF \$1363. NDC \$91825. FOB
21. HARBOR MAINTENANCE FEE (19 CFR 24.24) <input type="checkbox"/>					

22. I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 148.31, Customs Regulations

23. I hereby apply for the status designation indicated.

☒ NONPRIVILEGED FOREIGN
(19 CFR 148.42)

☐ PRIVILEGED FOREIGN
(19 CFR 148.41)

☐ ZONE RESTRICTED
(19 CFR 148.44)

☐ DOMESTIC
(19 CFR 148.43)

24. APPLICANT FIRM NAME
CEDAR CHEMICAL CORPORATION

25. BY (Signature)
Bob Christen

26. TITLE
MGR PURCH

27. DATE
7-11-97

F.T.Z. AGREES TO RECEIVE
MERCHANDISE INTO THE ZONE ☒

28. FOR THE F.T.Z. OPERATOR (Signature)
Bob Christen

29. TITLE
MGR PURCH

30. DATE
7-11-97

PERMIT
Permission is hereby granted to transfer the above merchandise into the Zone.

31. DISTRICT DIRECTOR OF CUSTOMS: BY (Signature)

32. TITLE

33. DATE

PERMIT
The above merchandise has been granted the requested status.

34. DISTRICT DIRECTOR OF CUSTOMS: BY (Signature)

35. TITLE

36. DATE

37. The goods described herein are authorized to be transferred: ☐ without exception ☐ except as noted below

PERMIT
TO
TRANSFER

38. CUSTOMS OFFICER AT STATION (Signature)

39. TITLE

40. STATION

41. DATE

42. RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)

43. CARTMAN

44. CHL NO

45. DATE

FTZ
OPERATOR'S
REPORT OF
MERCHANDISE

46. To the District Director of Customs: The above merchandise was received at the Zone on the date shown except as noted below:
WEIGHT DISCREPANCY OF +/- .05%
ACTUAL DELIVERED WEIGHT IS 17,845KG

RECEIVED
AT ZONE

47. FOR THE FTZ OPERATOR (Signature)
Bob Christen

48. TITLE
MGR PURCH

49. DATE
7-11-97

(Paperwork Reduction Act Notice on Reverse)

Customs Form 214 (020691)

AB0000018644

REF: 973255
19 CFR 10.60, 10.61, 18, 123.41, 123.42

TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT

403

Form Approved
OMB No 1515-0005

FTZ Entry No. 23971
Port NEW ORLEANS, LA.
Date 6/11/97

UNITED STATES CUSTOMS SERVICE

Dist. No. 20 Port Code No. 02 First U.S. Port of Unloading NEW ORLEANS, LA.
Port of NEW ORLEANS, LA. Date 6/30/97

Entry No. 313,963,646

Class of Entry I.T. (61)
(I.T.)(Wd.T.)(Wd.Ex.)(T.E.)(Drawback, etc.)

Entered or imported by CEDAR CHEMICAL CORPORATION to be shipped
In bond via TRIPLE E TRANSPORT BOND No. 209100312 consigned to
(CHL Number) (Vessel or carrier) (C/L number and initial) (Pier or station)
District Director of Customs At 2006 MEMPHIS, TN Final foreign destination
(For exportations only)
Consignee CEDAR CHEMICAL CORP. FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, ARKANSAS 72390
(At customs port of exit or destination)
Foreign port of lading LE HAYRE B/L No. TERNHILN30W0628 Date of sailing 5/17/97
(Above information to be furnished only when merchandise is imported by vessel)
Imported on the M/V NUEVO LEON V.30W Flag MX on 6/7/97 via DIRECT
(Name of vessel or carrier and motive power) (Date imported) (Last foreign port)
Exported from FRANCE on 5/17/97 Goods now at FOREIGN TRADE ZONE No. 2
(Country) (Date) (Name of warehouse, station, pier, etc.)

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
CCRU-197208-4	1 (20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SAFETY SHEET: 6.1 - 04 M.E.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSUS 2929.10.3000 C/O FR NFG: FRH0AGR1420LYO ZONE-TO-ZONE TRANSFER NPF FTZ #2 ADMISSION #23971	47708	93188	EST. NOT VERIFIED	

FTZ 14B
DIRECT DELIVERY PROGRAM
7-3-97
Sol Chait
SIGNATURE

G.O. No. _____

<p>CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND AND/OR LADING FOR EXPORTATION FOR</p> <p>2006 MEMPHIS, TENNESSEE (Port)</p> <p>WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN- DESCRIBED GOODS WERE:</p> <p>Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals</p> <p>Nos. _____ or the packages (were) (were not) labeled, or corded and sealed.</p> <p>(Inspector or warehouse officer)</p> <p>(Date)</p>	<p>Laden on the— (vessel, vehicle, or aircraft)</p> <p>which cleared for—</p> <p>on _____ (Date)</p> <p>as verified by export records</p> <p>(Inspector)</p> <p>(Date)</p>	<p>I truly declare that the statements contained herein are true and correct to the best of my knowledge and belief.</p> <p>Entered or withdrawn by CEDAR CHEMICAL CORPORATION by PHILBIN, CAZALAS & SANCHEZ, INC. Atty in fact</p> <p>To the Inspector or Warehouse Officer, the above-described goods shall be disposed of as specified herein.</p> <p>For the District Director of Customs.</p> <p>Received from the District Director of Customs of above district the merchandise described in this manifest for transportation and delivery into the custody of the customs officers at the port named above, all packages in apparent good order except as noted hereon.</p> <p>TRIPLE E TRANSPORT</p> <p>Attorney or Agent of Carrier</p>
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Approved through 01/31/94. OMB No. 1515-0086

CENSUS USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICEAPPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION

19 CFR 148.22, 148.23, 148.25-148.37, 148.39-148.41, 148.44, 148.63, 148.65

1. ZONE NO. AND LOCATION (Address) CEDAR CHEMICAL CORPORATION FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, ARKANSAS 72390
2. DISTRICT/PORT CODE 2006, MEMPHIS, TENNESSEE

3. REPORTING VESSEL (A FLAG) OTHER CARRIER (MS) MAY NUEVO LEON V.30N	4. EXPORT DATE 5/17/97	5. IMPORT DATE 6/7/97	6. ZONE NO. AND LOCATION (Address) 1007642-10
7. U.S. PORT OF UNLOADING NEW ORLEANS, LA.	8. FOREIGN PORT OF LADING LE HAVRE	9. BILL OF LADING/AMS NO. TEMUHLN130H0628	10. INWARDManifest NO. N/A
11. INBOUND CARRIER TRIPLE E TRANSPORT	12. LT. NO. AND DATE #313,863,646 6/30/97	13. LT. FROM (Port) NEW ORLEANS, LA.	

14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT <input type="checkbox"/> YES <input type="checkbox"/> NO	15. NO. OF PACKAGES AND COUNTRY OF ORIGIN 1 C/O FR	16. DESCRIPTION OF MERCHANDISE (20') TANK CONTAINER: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II EMERGENCY TELEPHONE: (800) 424-9390 CONTAINER NUMBER CCRU-197208-4 ZONE-TO-ZONE TRANSFER HPF FTZ #2 ADMISSION No. 23971	17. HTSUS NO. 2929.10.3000	18. QUANTITY (HTSUS) 17750 KG	19. GROSS WEIGHT 21640 KG	20. SEPARATE VALUE & ADGR CHGS. \$93188. CIF \$1363. NDC \$91825. FOB
21. HARBOR MAINTENANCE FEE (19 CFR 24.26) <input checked="" type="checkbox"/>						

22. I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 148.31, Customs Regulations.

23. I hereby apply for the status designation indicated: <input checked="" type="checkbox"/> NONPRIVILEGED FOREIGN (19 CFR 148.42) <input type="checkbox"/> PRIVILEGED FOREIGN (19 CFR 148.41) <input type="checkbox"/> ZONE RESTRICTED (19 CFR 148.44) <input type="checkbox"/> DOMESTIC (19 CFR 148.43)				
24. APPLICANT FIRM NAME CEDAR CHEMICAL CORPORATION		25. SIGNATURE <i>Bob Chmura</i>	26. TITLE MGR PURCH	27. DATE 7-11-97
28. F.T.Z. AGREES TO RECEIVE MERCHANDISE INTO THE ZONE <input checked="" type="checkbox"/>		29. SIGNATURE <i>Bob Chmura</i>	30. TITLE MGR PURCH	31. DATE 7-11-97
PERMIT	Permission is hereby granted to transfer the above merchandise into the Zone.	31. DISTRICT DIRECTOR OF CUSTOMS: BY (Signature)	32. TITLE	33. DATE
PERMIT	The above merchandise has been granted the requested status.	34. DISTRICT DIRECTOR OF CUSTOMS: BY (Signature)	35. TITLE	36. DATE
37. The goods described herein are authorized to be transferred: <input type="checkbox"/> without exception <input type="checkbox"/> except as noted below				
PERMIT TO TRANSFER	38. CUSTOMS OFFICER AT STATION (Signature) <i>[Signature]</i>	39. TITLE SI	40. STATION	41. DATE 7-18-97
	42. RECEIVED FOR TRANSFER TO ZONE (Owner's Signature) <i>[Signature]</i>	43. CARTMAN	44. CHL NO.	45. DATE
FTZ OPERATOR'S REPORT OF MERCHANDISE RECEIVED AT ZONE	46. To the District Director of Customs: The above merchandise was received at the Zone on the date shown except as noted below: WEIGHT DISCREPANCY OF +/- .06% ACTUAL DELIVERED WEIGHT IS 17,845KG			
	47. SIGNATURE <i>Bob Chmura</i>	48. TITLE MGR PURCH	49. DATE 7-11-97	

(Paperwork Reduction Act Notice on Reverse)

Customs Form 214 (020691)

REF: 973255

19 CFR 101.10, 10.61, 18, 123.41, 123.42

TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT

UNITED STATES CUSTOMS SERVICE

403

Exam Approved
QMLR No 1515-0805

FTZ Entry No. 23971

Port NEW ORLEANS, LA.

Date 6/11/97

Entry No. 313,963,646

Class of Entry I.T. (61)
(LT)(WMT)(WLE)(T.E.)(Drawback, etc.)

Dist No. 20 Port Code No. 02 First U.S. Port of Unlading

NEW ORLEANS, LA.

Port of NEW ORLEANS, LA.

Date 6/30/97

Entered or imported by CEDAR CHEMICAL CORPORATION to be shipped

in bond via TRIPLE E TRANSPORT BOND No. 209100312 consigned to
(CHL Number) (Vessel or carrier) (Company number and initial) (Pier or station)

District Director of Customs At 2006 MEMPHIS, TN Final foreign destination (For exportations only)

Consignee CEDAR CHEMICAL CORP. FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, ARKANSAS 72390
(At customs port of exit or destination)Foreign port of lading LE HAVRE B/L No. TERNILINUS00628 Date of sailing 5/17/97
(Above information to be furnished only when merchandise is imported by vessel)Imported on the N/Y NUEVO LEON V. 30W Flag MX on 6/7/97 via DIRECT
(Name of vessel or carrier and motive power) (Date imported) (Last foreign port)Exported from FRANCE on 6/17/97 Goods now at FOREIGN TRADE ZONE No. 2
(Country) (Date) (Name of warehouse, station, pier, etc.)

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
RU-197208-4	1 (20') TANK CONTAINER: 3,4-DECHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SAFETY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSUS 2929.10.3000 C/O FR NFB: FRIH06R1420LYO ZONE-TO-ZONE TRANSFER NPF FTZ #2 ADMISSION #23971	47708	93188	EST. NOT VERIFIED	

 FTZ 14B
 DIRECT DELIVERY PROGRAM
 7-3-97
Sub Chait
 SIGNATURE

G.O. No. _____ CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND AND/OR LADING FOR EXPORTATION FOR 2006 MEMPHIS, TENNESSEE WITH THE EXCEPTIONS NOTED ABOVE THE WITHIN- DESCRIBED GOODS WERE: Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals Not or the packages (were) (were not) labeled, or corded and sealed. (Inspector or warehouse officer) _____ (Date)		I truly declare that the statements contained herein are true and correct to the best of my knowledge and belief. Entered or withdrawn by CEDAR CHEMICAL CORPORATION by PHILBIN, CAZALAS & ST. ANNE, INC. Atty in fact _____ To the Inspector or Warehouse Officer, the above-described goods shall be disposed of as specified herein. For the District Director of Customs Received from the District Director of Customs of above district the merchandise described in this manifest for transportation and delivery into the custody of the customs officers at the port named above, all packages in apparent good order except as noted hereon TRIPLE E TRANSPORT _____ Attorney or Agent of Carrier
Laden on the— _____ (Vessel, vehicle or aircraft) which cleared for— _____ on _____ (Date) as verified by export records. _____ (Inspector) _____ (Date)		

Customs Form 7512 (040984)

AB0000018644

RAW MATERIAL RECEIVING RECORD No 10051

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

1 x 15

RECEIVED BY

KC

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
7-3-87	04-66882	CCRU-197208-Y	Net MTA 39,132

SHIPPER

Phone DOWMANC

CARRIER

EEE

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	50A CONTAINER	2	4015A	DCOT

COMMENTS

... A IN LAIN

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION

COMMENTS

(A) ...

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
L. All	✓		

PLANT WEIGHT

UNLOADING TIMES

NET

START TIME

END TIME

COMMENTS

... See container on Dept. ...

TOLOCHIMIE

ADRESSER VOTRE CORRESPONDANCE A :

TOLOCHIMIE - Impasse PALAYRÉ
B.P. 1198 - 31037 TOULOUSE CEDEX 1
TÉL. : 05 61 31 78 78
TÉLÉCOPIE : 05 61 31 78 50

N / REF : MF / ML

DATE 13-Mai-97

CEDAR

COMMANDE N° 40127462
EXPEDITION N° 417
DU 13 Mai 97

CAMION CITERNE N°
CONTAINER N° CCAU 197 208-4
WAGON N°

N° DE LOT DU PRODUIT B303A/13.5.97.5

N° DE LOT DU CONDITIONNEMENT
(s' il y a lieu)

CERTIFICAT D'ANALYSE DU 3,4-DICHLOROPHENYLISOCYANATE

Nous certifions que le produit ci-dessus a la composition suivante :

M E T H O D E	Détermination	Valeur	Unité	Spécification	Méthode d'analys Tolochimie
1	aspect	conforme		solide blanc	Visuelle
2	3,4-dichlorophénylisocyanate	99.64	%	> 98.5	To 10.27.88
2	2,3-dichlorophénylisocyanate	0.25	%	pour information	To 10.27.88
2	3-chloro+ 4-chlorophénylisocyanate	0	%	pour information	To 10.27.88
2	monochlorobenzène	0	%	< 0.2	To 10.27.88
2	semi-lourds	0.03	%	< 0.8	To 10.27.88
autre	isocyanate de chlorotolyle	0.08	%		
autre			%		

principe de la méthode:

1	visuelle
2	C.P.G
autre	
autre	

LE RESPONSABLE DU CONTROLE ANALYTIQUE

RHONE-POULENC AGRO

14-20, RUE PIERRE BAIZET B P 9163
69263 LYON CEDEX 09 - FRANCE
TEL 04 72 85 25 25 - FAX 04 72 85 27 89
TLX 310 098 F RHÔNE
N° IDENTIFICATION TVA FR 53 969 503 309

ORIGINAL

INVOICE NO: 60115118 DATED: 27.05.1997
DWT : 265 01 91

CONSIGNEE: CECAN
CECAN CHEMICAL CORPORATION
ATTN: 205 CHRISTIAN
P.O. BOX 801 2749
AR 72390 WEST HELENA
UNITED STATES

INVOICEE: CECAN
CECAN CHEMICAL CORPORATION
ATTN: 205 CHRISTIAN
P.O. BOX 801 2749
AR 72390 WEST HELENA
UNITED STATES

DATE: 27.05.1997
REF: 60115118
SHIPPING BY: CIP
TERMS OF DELIVERY: CIF - COST INS FREIGHT
TERMS OF PAYMENT: 90 DAYS INVOICE DATE
PAYMENT DATE: 26.08.1997
PAYMENT MODE: TELEGRAPHIC TRANSFER
CURRENCY: USD

EOC : NEW ORLEANS

PRODUCT CODE: 18578011
QUANTITY: 3.4 DEPT CIVER
UNIT PRICE: 5.12 USD PER 1 L
TOTAL: 17.408 USD

SH N° : 29101090

NAME: RHONE-POULENC AGRO
ADDRESS: 14-20, RUE PIERRE BAIZET
CEDEX 09
69263 LYON
FRANCE

TOTAL TO BE PAID

17.408 USD

EXONERATION 12-ART. 262TER 1 DU CODE GENERAL DES IMPOTS

TELEGRAPHIC TRANSFER OF SWIFT BY SOCIETE GENERALE LYON GRANDES
ENTREPRISES : ACCOUNT NUMBER 781109829
SWIFT : SWIFT CODE FRPYLE LYON ENTREPRISES 0128

RHÔNE-POULENC
Sf
14/20
RUE PIERRE BAIZET B P 9163
CEDEX 09
69263 LYON
TEL 04 72 85 25 25 - FAX 04 72 85 27 89
SA Capital 1431 515 000 - RC LYON 969 503 309

REF: 973255

18 CFR 101.10, 10.61, 18, 123.41, 123.42

TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT

UNITED STATES CUSTOMS SERVICE

Form Approved
OMB No. 1515-0005

403

Entry No. **313,963,646**Class of Entry **L.T. (61)**
(L.T.)(Wd.T.)(Wd.Ex.)(T.E.)(Drawback, etc.)Port **NEW ORLEANS, LA.**Date **6/11/97**Dist. No. **20** Port Code No. **02** First U.S. Port of Unlading **NEW ORLEANS, LA.**Port of **NEW ORLEANS, LA.** Date **6/30/97**Entered or imported by **CEDAR CHEMICAL CORPORATION** to be shippedIn bond via **TRIPLE E TRANSPORT** BOND No. **209100312** consigned to
(CHL Number) (Vessel or carrier) (Car number and initial) (Pier or station)District Director of Customs At **2006 MEMPHIS, TN** Final foreign destination (For exportations only)Consignee **CEDAR CHEMICAL CORP.** FTZ **148** **HIGHWAY 242 SOUTH** **WEST HELENA, ARKANSAS 72390**
(At customs port of exit or destination)Foreign port of lading **LE HAVRE** B/L No. **TEDEHIL3000528** Date of sailing **5/17/97**
(Above information to be furnished only when merchandise is imported by vessel)Imported on the **N/V MIEVO LEON V.30N** Flag **FR** on **6/7/97** via **DIRECT**
(Name of vessel or carrier and motive power) (Date imported) (Last foreign port)Exported from **FRANCE** on **6/17/97** Goods now at **FOREIGN TRADE ZONE No. 2**
(Country) (Date) (Name of warehouse, station, pier, etc.)

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
CCN-197208-4	1 (20') TANK CONTAINER: 3,3-DICHLOROPHENYLISOCYANATE (3,3-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SAFETY SHEET: 6.1 - 04 N.E.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSUS 2929.10.3000 C/O FR NFB: FRHCBRI420LYO ZONE-TO-ZONE TRANSFER NFB FTZ #2 ADMISSION #23971	47708	93188	EST. NOT VERIFIED	

G.O. No.

CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND
AND/OR LADING FOR EXPORTATION FOR**2006 MEMPHIS, TENNESSEE**
(Port)WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-
DESCRIBED GOODS WERE:Delivered to the Carrier
named above, for delivery to
the District Director of
Customs at destination sealed
with Customs sealsNos. _____
or the packages (were) (were
not) labeled, or corded and
sealed.

(Inspector or warehouse officer)

(Date)

Laden on the—

(Vessel, vehicle, or aircraft)

which cleared for—

on _____
(Date)

as verified by export records.

(Inspector)

(Date)

I truly declare that the statements contained herein are true and
correct to the best of my knowledge and belief.Entered or withdrawn by
CEDAR CHEMICAL CORPORATION
by **PHILBIN, CAZALAS & ST. JOHN, INC.**
Atty in factTo the Inspector or Warehouse Officer, the above-described
goods shall be disposed of as specified herein.

For the District Director of Customs.

Received from the District Director of Customs of above district the
merchandise described in this manifest for transportation and delivery
into the custody of the customs officers at the port named above,
all packages in apparent good order except as noted hereon.**TRIPLE E TRANSPORT**

Attorney or Agent of Carrier

Customs Form 7512 (040984)

AB0000018644

INSTRUCTIONS

Consult customs officer or Part 18, Customs Regulations, for the appropriate number of copies required for entry, withdrawal, or manifest purposes.

For the purpose of transfer under the cartage or lighterage provisions of a proper bond to the place of shipment from the port of entry, extra copies bearing a stamp or notation as to their intended use may be required for local administration.

As the form is the same whether used as an entry or withdrawal or manifest, all copies may be prepared at the same time by carbon process, unless more than one vessel or vehicle is used, in which case a separate set of manifest must be prepared for each such vessel or vehicle.

Whenever this form is used as an entry or withdrawal, care should be taken that the kind of entry is plainly shown in the block in the upper right-hand corner of the face of the entry.

This form may be printed by private parties provided that the supply printed conforms to the official form in size, wording, arrangement, and quality and color of paper and ink. For sale by District Directors of Customs.

RECORD OF CARTAGE OR LIGHTERAGE

Delivered to Cartman or Lighterman in apparent good condition except as noted on this form.

CONVEYANCE	QUANTITY	DATE	DELIVERED	RECEIVED	RECEIVED
<i>TRUCK # 209100312</i>	<i>1 TANK</i>	<i>7/2/97</i>	<i>[Signature]</i> (Inspector or Warehouse Officer)	<i>[Signature]</i> (Cartman or Lighterman)	<i>7/2/97</i> (Date) (Inspector)
			(Inspector or Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
			(Inspector or Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
			(Inspector or Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
Total			(Warehouse proprietor)		

CERTIFICATES OF TRANSFER. (If required)

I certify that within - described goods were transferred by reason of _____ to _____ on _____ at _____ and sealed with _____ or seals Nos. _____, and that goods were in same apparent condition as noted on original lading except _____.

Inspector, Conductor, or Master

I certify that within - described goods were transferred by reason of _____ to _____ on _____ at _____ and sealed with _____ or seals Nos. _____, and that goods were in same apparent condition as noted on original lading except _____.

Inspector, Conductor, or Master

INSPECTED

at _____
on _____ (Date)
and seals found _____
Inspector

If transfer occurs within city limits of a customs port or station, customs officers must be notified to supervise transfer.

INSPECTOR'S REPORT OF DISCHARGE AT DESTINATION

Port _____, Station _____ (Date) _____

TO THE DISTRICT DIRECTOR OF CUSTOMS Delivering line _____ Car No _____ Initial _____
Arrived _____ (Date) _____ Condition of car _____ of seals _____ of packages _____

Date of Delivery to Importer, or Gen Order	PACKAGES	No. and kind of Entry or General Order	Number of Truck or Lighter No.	CONDITIONS ETC.

I certify above report is correct.

Inspector.

USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICEAPPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION

19 CFR 146.22, 146.32, 146.35-146.37, 146.39-146.41, 146.44, 146.53, 146.68

1. ZONE NO. AND LOCATION (Address)

FOREIGN TRADE ZONE No. 2
NAPOLEON AVENUE WHARF
NEW ORLEANS, LA.

2. DISTRICT/PORT CODE

20 - 02 NEW ORLEANS, LA.

3. IMPORTING VESSEL (& FLAG)/OTHER CARRIER

(MX) M/V NUEVO LEON V.30W

4. EXPORT DATE

5/17/97

5. IMPORT DATE

6/7/97

6. ZONE ADMISSION NO.

23971

7. U.S. PORT OF UNLADING

NEW ORLEANS, LA.

8. FOREIGN PORT OF LADING

LE HAVRE

9. BILL OF LADING/AWB NO

TEMULHNLN30W0628

10. INWARD M/FEST NO.

N/A

11. INBOND CARRIER

N/A

12. I.T. NO. AND DATE

N/A

13. I.T. FROM (Port)

N/A

14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT?

☐ YES☐ NO

15. NO OF PACKAGES AND COUNTRY OF ORIGIN	16 DESCRIPTION OF MERCHANDISE	17 HTSUS NO	18. QUANTITY (HTSUS)	19. GROSS WEIGHT	20 SEPARATE VALUE & AGGR CHGS
7 C/O FR	(20') TANK CONTAINERS: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II EMERGENCY TELEPHONE: (800) 424-9390	2929.10.3000	132200 KG	159760 KG	\$694,050.CIF \$10,150.NDC \$683,900.FOB
21 HARBOR MAINTENANCE FEE (19 CFR 24.24) <input checked="" type="checkbox"/>					\$854.88

22. I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations.

23. I hereby apply for the status designation indicated:

☒ NONPRIVILEGED FOREIGN
(19 CFR 146.42)

☐ PRIVILEGED FOREIGN
(19 CFR 146.41)

☐ ZONE RESTRICTED
(19 CFR 146.44)

☐ DOMESTIC
(19 CFR 146.43)

24. APPLICANT FIRM NAME

CEDAR CHEMICAL CORPORATION

25. BY (Signature)

PHILBIN, CAZALAS & ST. JOHN INC. Atty in fact

26. TITLE

Atty in fact

27. DATE

6/10/97

F.T.Z. AGREES TO RECEIVE
MERCHANDISE INTO THE ZONE ☒

28. FOR THE F.T.Z. OPERATOR (Signature)

29. TITLE

INSP

30. DATE

6/11/97

PERMIT

Permission is hereby granted to transfer the above merchandise into the Zone.

31. DISTRICT DIRECTOR OF CUSTOMS, BY (Signature)

32. TITLE

INSP

33. DATE

6/11/97

PERMIT

The above merchandise has been granted the requested status.

34. DISTRICT DIRECTOR OF CUSTOMS, BY (Signature)

35. TITLE

INSP

36. DATE

6/11/97

37. The goods described herein are authorized to be transferred

☒ without exception

☐ except as noted below

PERMIT

TO

TRANSFER

38. CUSTOMS OFFICER AT STATION (Signature)

39. TITLE

GULF STATES CARTAGE

40. STATION

CHL #187

41. DATE

6/10/97

42. REQUIRED FOR TRANSFER TO ZONE (Driver's Signature)

Thomas P. O'Connell

43. CARTMAN

CHL #187

44. CHL NO

6/10/97

45. DATE

6/10/97

FTZ

OPERATOR'S

REPORT OF

MERCHANDISE

RECEIVED

AT ZONE

46. To the District Director of Customs: The above merchandise was received at the Zone on the date shown except as noted below

CCR4 1970 77-6 FR2076 SIDE SIDE DENT

AUDIT INSPECTOR FTZ #2

47. FOR THE FTZ OPERATOR (Signature)

48. TITLE

WLB SUP

49. DATE

6-13-97

(Paperwork Reduction Act Notice on Reverse)

Customs Form 214 (02/89)

AB0000018631

69283 LYON CEDEX 09 - FRANCE
 TEL 04 72 85 25 25 - FAX 04 72 85 27 89
 TLX 910 088 F RHONE
 N° IDENTIFICATION TVA : FR 53 989 503 309

INVOICE PUR 4012047 DATED 23.05.1997
 1101 2 055 01291

CONSIGNEE: UNICORP
 CEDAR CHEMICAL CORPORATION
 ATTN: BOB CHRISTIAN
 HWY 242 SOUTH
 AR 72390 WEST HELENA
 UNITED STATES

DEBITEUR: UNICORP
 CEDAR CHEMICAL CORPORATION
 ATTN: BOB CHRISTIAN
 P.O. BOX 2749
 AR 72390 WEST HELENA
 UNITED STATES

Q/RCT 1 01 40120470000
 Y/RCT 2 01050077
 SHIPPING BY 3
 TERMS OF DELIVERY 4 CIF - 1051 115 115 115
 TERMS OF PAYMENT 5 90 DAYS UNPAID IN ADVANCE
 PAYMENT DATE 6 21.06.1997
 PAYMENT MOD 7 TELEGRAPHIC TRANSFER
 CURRENCY 8 USD

DIR: NEW ORLEANS

PRODUCT CODE 1 180700011
 CUST. MATERIAL NO 2 04 1000 01000
 QUANTITY 3 11200.00 LB
 UNIT PRICE 4 5.05 115 115 115
 AMOUNT 5 566.000.00 USD

DATE: 22/01/99

REMARKS: 1 180700011 11200.00 LB
 2 04 1000 01000
 3 11200.00 LB
 4 5.05 115 115 115
 5 566.000.00 USD

TOTAL TO BE PAID

566.000.00 USD

EXPLANATION OF THE INVOICE: 1 180700011 11200.00 LB

TELEGRAPHIC TRANSFER: 1 180700011 11200.00 LB
 UNPAID IN ADVANCE: 2 04 1000 01000
 THE UNIT PRICE IS 5.05 115 115 115

[Signature]
 SAISON 1997-1998
 13 PIERRE BAIZET 8 P 9163
 63 LYON CEDEX 09
 Tel 04 72 85 25 25 - Fax 04 72 85 27 89
 SA Capital 1 431 515 000 F - RC LYON 8 989 503 309

CENSUS USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICEAPPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION

19 CFR 146.22, 146.32, 146.35, 146.37, 146.39-146.41, 146.44, 146.53, 146.65

1 ZONE NO AND LOCATION (Address)
CEDAR CHEMICAL CORPORATION
FTZ 14B
HIGHWAY 242 SOUTH
WEST HELENA, ARKANSAS 72390

2 DISTRICT/PORT CODE
20 - 06 MEMPHIS, TENNESSEE

3 IMPORTING VESSEL (& FLAG)/OTHER CARRIER
(AM) S/S SEA-LAND PERFORMANCE

4 EXPORT DATE
5/24/97

5 IMPORT DATE
6/9/97

6 ZONE ADMISSION NO
19970620-10

7 U.S. PORT OF UNLADING
HOUSTON, TEXAS

8 FOREIGN PORT OF LADING
LE HAVRE

9 BILL OF LADING/AWB NO
POCLH721278875

10 INWARD M'FEST NO
N/A

11 INBOND CARRIER
TRIPLE E TRANSPORT

12 IT NO AND DATE
#313,963,576 6/19/97

13 IT FROM (Port)
NEW ORLEANS, LA.

14 STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT? ☐ YES ☐ NO

15 NO OF PACKAGES AND COUNTRY OF ORIGIN	16 DESCRIPTION OF MERCHANDISE	17 HTSUS NO	18 QUANTITY (HTSUS)	19 GROSS WEIGHT	20 SEPARATE VALUE & ACCH CHGS
2 C/O FR	(20') TANK CONTAINERS: 3-4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390	2929.10.3000	39000 Kg	46620 Kg	\$204,750. CII \$3,581. NDI \$201,169. FOI
<div style="border: 1px solid black; padding: 10px; text-align: center;"> FTZ 14B DIRECT DELIVERY PROGRAM SIGNATURE </div>					
21 HARBOR MAINTENANCE FEE (19 CFR 24.24) <input checked="" type="checkbox"/>					\$251.46

22 I hereby apply for admission of the above merchandise into the Foreign Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign Trade Zone within the meaning of section 3 of the Foreign Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations.

23 I hereby apply for the status designation indicated

☒ NONPRIVILEGED FOREIGN
(19 CFR 146.42)

☐ PRIVILEGED FOREIGN
(19 CFR 146.41)

☐ ZONE RESTRICTED
(19 CFR 146.44)

☐ DOMESTIC
(19 CFR 146.43)

24 APPLICANT FIRM NAME CEDAR CHEMICAL CORPORATION	25 BY (Signature) <i>Bob Christie</i>	26 TITLE Mgr Purchasing	27 DATE 7-1-97
FTZ AGREES TO RECEIVE MERCHANDISE INTO THE ZONE <input checked="" type="checkbox"/>	28 FOR THE FTZ OPERATOR (Signature) <i>Bob Christie</i>	29 TITLE Mgr Purchasing	30 DATE 7-1-97
PERMIT Permission is hereby granted to transfer the above merchandise into the Zone.	31 DISTRICT DIRECTOR OF CUSTOMS BY (Signature)	32 TITLE	33 DATE
PERMIT The above merchandise has been granted the requested status.	34 DISTRICT DIRECTOR OF CUSTOMS BY (Signature)	35 TITLE	36 DATE
PERMIT TO TRANSFER	37 The goods described herein are authorized to be transferred <input type="checkbox"/> without exception <input checked="" type="checkbox"/> except as noted below		
	38 CUSTOMS OFFICER AT STATION (Signature) <i>James Davis</i>	39 TITLE	40 STATION
	42 RECEIVED FOR TRANSFER TO ZONE (Driver's Signature) <i>James Davis</i>	43 CARTMAN	44 CHL NO
FTZ OPERATOR'S REPORT OF MERCHANDISE	45 To the District Director of Customs: The above merchandise was received at the Zone on the date shown except as noted below DISCREPANCY OF +/- .05% UTC457005.4 - ACTUAL DELIVERED WEIGHT OF 43,580 LBS. UTC457006.0 - ACTUAL DELIVERED WEIGHT OF 43,920 LBS.		
RECEIVED AT ZONE	47 BY (Signature) <i>Bob Christie</i>	48 TITLE Mgr Purchasing	49 DATE 6-20-97

19 CFR 146.31, 146.32, 146.35, 146.37, 146.39-146.41, 146.44, 146.53, 146.65

Customs Form 214 (070041)

AB0000018572

AMS

REF: 973242
19 CFR 10.60, 10.61, 18, 123.41, 123.42TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT

403

Form Approved
OMB No 1515-0005

I.T.	Entry No. V13-22010763
Port	HOUSTON, TEXAS
Date	6/9/97

UNITED STATES CUSTOMS SERVICE

Dist No 20 Port Code No 02 First U.S. Port of Unloading HOUSTON, TEXAS

Port of NEW ORLEANS, LA. Date 6/19/97

Entry No. 313,963,576

Class of Entry I.T. (61)

(I.T.)(Wd.T.)(Wd.Ex.)(T.E.)(Drawback, etc.)

Entered or imported by CEDAR CHEMICAL CORPORATION to be shipped

in bond via TRIPLE E TRANSPORT BOND No. 209100312 consigned to

District Director of Customs At 2006 MEMPHIS, TN Final foreign destination

Consignee CEDAR CHEMICAL CORP. FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, ARKANSAS 72390

Foreign port of lading LE HAVRE B.L. No. 1001 HB721278875 Date of sailing 5/24/97

Imported on the S/S SEA-LAND PERFORMANCE Flag US on 6/9/97 via DIRECT

Exported from FRANCE on 5/24/97 Goods now at AVONDALE CONTAINER YARD WEST

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RAIL	DUTY
UTCU-457005-4 UTCU-457006-0	2 (20') TANK CONTAINERS: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSUS 2929.10.3000 C/O FR HFG: FRRHOAGR1420LYO	102778	204750	EST. NOT VERIFIED	

GO No. 2006 MEMPHIS, TENNESSEE

CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND AND/OR LADING FOR EXPORTATION FOR

WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-DESCRIBED GOODS WERE

Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals

Not or the packages (were) (were not) labeled or corded and sealed

Laden on the—

(Vessel, vehicle or aircraft)

which cleared for—

on (Date)

as verified by export records

(Inspector or warehouse officer)

(Inspector)

(Date)

(Date)

I truly declare that the statements contained herein are true and correct to the best of my knowledge and belief

Entered or withdrawn by CEDAR CHEMICAL CORPORATION

by PHILBIN, CAZAMAS ST. JOHN, INC. Atty in fact

To the Inspector or Warehouse Officer The above-described goods shall be disposed of as specified herein

For the District Director of Customs.

Received from the District Director of Customs of above district the merchandise described in this manifest for transportation and delivery into the custody of the customs officers at the port named above, all packages in apparent good order except as noted hereon.

TRIPLE E TRANSPORT

Attorney or Agent of Carrier

Customs Form 7512 (040984)

AB0000018572

RAW MATERIAL RECEIVING RECORD

No 8872

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0800

RECEIVED BY
M. Sullivan

SECTION 1

DATE: 6-20-97 ORDER NO.: na CAR OR TRUCK NO.: UTCU457005-4 DECLARED WEIGHT: Net na 43320 FT2

SHIPPER: Hillcat CARRIER: Triple E CADAR 43309

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit # 5	40150	DCPI

COMMENTS
no C.O.A.

SECTION 2

RECIPIENT: TIME SAMPLE/CERTIFICATE TAKEN TO LAB:

UNLOADED AT (tank number, unit, warehouse, etc.):
PRD

COMMENTS

SECTION 3

AS TESTED: TLP ACCEPT: X REJECT: REASON FOR REJECTION:

COMMENTS

SECTION 4

SHIP'S CERTIFICATE: Sued ACCEPT: X REJECT: REASON FOR REJECTION:

PLANT WEIGHT: NET 43580 UNLOADING TIMES: START TIME: END TIME:

COMMENTS

TE 6/20/47

WEIGHED ON A FAIRBANKS SCALE *cont*
47644570054

CUSTOMERS NAME _____
ADDRESS W. H. Hines and
COMMODITY fuel oil
CARRIER North State

REMARKS

77580 12:00AM FJ 00 00

LBS. GROSS _____
LBS. TARE - DRIVER ON _____ OFF _____
LBS. NET @ _____ PER LB. PRICE _____

16760 12:00AM .J 00 00

60820 full cont only
17240
43500 Net
FAIRBANKS SCALE CAT. 083908

SHIPPER _____
WEIGHER _____

CENSUS/USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICE

**APPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION**

19 CFR 146.22, 146.32, 146.35-146.37, 146.39-146.41, 146.44, 146.53, 146.66

Approved through 01/11/94 OMB No. 1516-0086

1. ZONE NO. AND LOCATION (Address)
**CEDAR CHEMICAL CORPORATION
FTZ 14B
HIGHWAY 242 SOUTH
WEST HELENA, ARKANSAS 72390**

2. DISTRICT/PORT CODE
20 - 06 MEMPHIS, TENNESSEE

3. IMPORTING VESSEL (S FLAG)/OTHER CARRIER
(AM) S/S SEA-LAND PERFORMANCE

4. EXPORT DATE
5/24/97

5. IMPORT DATE
6/9/97

6. ZONE ADMISSION NO.
19970620-10

7. U.S. PORT OF UNLOADING
HOUSTON, TEXAS

8. FOREIGN PORT OF LADING
LE HAVRE

9. BILL OF LADING/AWS NO.
POCLKB721278875

10. INWARD M/FEST NO.
N/A

11. INBOND CARRIER
TRIPLE E TRANSPORT

12. LT. NO. AND DATE
#313,963,576 6/19/97

13. LT. FROM (Port)
NEW ORLEANS, LA.

14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT?

☐ YES ☐ NO

15. NO. OF PACKAGES AND COUNTRY OF ORIGIN	16. DESCRIPTION OF MERCHANDISE	17. HTSUS NO.	18. QUANTITY (HTSUS)	19. GROSS WEIGHT	20. SEPARATE VALUE & AGGR CHGS.
2 C/O FR	(20') TANK CONTAINERS: 3-4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390	2929.10.3000	39000 Kg	46620 Kg	\$204,750. CI \$3,581. ND \$201,169. FO
		<div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>FTZ 14B DIRECT DELIVERY PROGRAM</p> <p>SIGNATURE</p> </div>			
		31. HARBOR MAINTENANCE FEE (19 CFR 24.24) <input checked="" type="checkbox"/>			\$251.46

22. I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations.

23. I hereby apply for the status designation indicated:

☒ NONPRIVILEGED FOREIGN
(19 CFR 146.42)

☐ PRIVILEGED FOREIGN
(19 CFR 146.41)

☐ ZONE RESTRICTED
(19 CFR 146.44)

☐ DOMESTIC
(19 CFR 146.43)

24. APPLICANT FIRM NAME
CEDAR CHEMICAL CORPORATION

25. BY (Signature)
Bob Christie

26. TITLE
Mgr Purchasing

27. DATE
7-1-97

F.T.Z. AGREES TO RECEIVE
MERCHANDISE INTO THE ZONE ☒

28. FOR THE F.T.Z. OPERATOR (Signature)
Bob Christie

29. TITLE
Mgr Purchasing

30. DATE
7-1-97

PERMIT
Permission is hereby granted to
transfer the above merchandise
into the Zone.

31. DISTRICT DIRECTOR OF CUSTOMS: BY (Signature)
[Signature]

32. TITLE
ST Rep.

33. DATE
7/1/97

PERMIT
The above merchandise has been
granted the requested status.

34. DISTRICT DIRECTOR OF CUSTOMS: BY (Signature)
[Signature]

35. TITLE
ST Rep.

36. DATE
7/1/97

37. The goods described herein are authorized to be transferred ☐ without exception ☒ except as noted below

PERMIT
TO
TRANSFER

38. CUSTOMS OFFICER AT STATION (Signature)
[Signature]

39. TITLE
S.I.

40. STATION

41. DATE
7-1-97

42. RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)
James [Signature]

43. CARTMAN

44. CHL. NO.

45. DATE
6-20-97

FTZ
OPERATOR'S
REPORT OF
MERCHANDISE

46. As the District Director of Customs: The above merchandise was received at the Zone on the date shown except as noted below:
**DISCREPANCY OF +/- .05%
UTC457005.4 - ACTUAL DELIVERED WEIGHT OF 43,580 LBS.
UTC457006.0 - ACTUAL DELIVERED WEIGHT OF 43,920 LBS.**

RECEIVED
AT ZONE

47. FOR THE FTZ OPERATOR (Signature)
Bob Christie

48. TITLE
Mgr Purchasing

49. DATE
6-20-97

(Paperwork Reduction Act Notice on Reverse)

Customs Form 214 (020691)

CENSUS USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICEAPPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION1. ZONE NO. AND LOCATION (Address)
CEDAR CHEMICAL CORPORATION
FTZ 14B
HIGHWAY 242 SOUTH
WEST HELENA, ARKANSAS 723902. DISTRICT/PORT CODE
20 - 06 MEMPHIS, TENNESSEE

19 CFR 146.22, 146.32, 146.35-146.37, 146.39-146.41, 146.44, 146.53, 146.66

3. IMPORTING VESSEL (& FLAG)/OTHER CARRIER (AM) S/S SEA-LAND PERFORMANCE		4. EXPORT DATE 5/24/97	5. IMPORT DATE 6/9/97	6. ZONE ADMISSION NO
7. U.S. PORT OF UNLADING HOUSTON, TEXAS	8. FOREIGN PORT OF LADING LE HAVRE	9. BILL OF LADING/AWB NO. POCLLHB721278875		10. INWARD M'FEST NO. N/A
11. INBOND CARRIER TRIPLE E TRANSPORT	12. IT NO AND DATE #313,963,576 6/19/97	13. LT. FROM (Port) NEW ORLEANS, LA.		

15 NO OF PACKAGES AND COUNTRY OF ORIGIN	16 DESCRIPTION OF MERCHANDISE	17 HTSUS NO	18 QUANTITY (HTSUS)	19 GROSS WEIGHT	20 SEPARATE VALUE & AGGR CHGS
2 C/O FR	(20') TANK CONTAINERS: 3-4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390	2929.10.3000 FTZ 14B DIRECT DELIVERY PROGRAM SIGNATURE	39000 Kg	46620 Kg	\$204,750. CIF \$3,581. NDC \$201,169. FOB
21 HARBOR MAINTENANCE FEE (19 CFR 24.24) <input checked="" type="checkbox"/>					\$251.46

22. I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations.

23. I hereby apply for the status designation indicated

☒ NONPRIVILEGED FOREIGN
(19 CFR 146.42)☐ PRIVILEGED FOREIGN
(19 CFR 146.41)☐ ZONE RESTRICTED
(19 CFR 146.44)☐ DOMESTIC
(19 CFR 146.43)

24. APPLICANT FIRM NAME CEDAR CHEMICAL CORPORATION		25. BY (Signature)	26. TITLE	27. DATE
FTZ AGREES TO RECEIVE MERCHANDISE INTO THE ZONE		28. FOR THE FTZ OPERATOR (Signature)	29. TITLE	30. DATE
PERMIT	Permission is hereby granted to transfer the above merchandise into the Zone.	31. DISTRICT DIRECTOR OF CUSTOMS BY (Signature)	32. TITLE	33. DATE
PERMIT	The above merchandise has been granted the requested status.	34. DISTRICT DIRECTOR OF CUSTOMS BY (Signature)	35. TITLE	36. DATE
37. The goods described herein are authorized to be transferred <input type="checkbox"/> without exception <input checked="" type="checkbox"/> except as noted below				
PERMIT TO TRANSFER	38. CUSTOMS OFFICER AT STATION (Signature)	39. TITLE	40. STATION	41. DATE
	42. RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)	43. CARTMAN	44. CHL NO	45. DATE
FTZ OPERATOR'S REPORT OF MERCHANDISE RECEIVED AT ZONE	46. To the District Director of Customs: The above merchandise was received at the Zone on the date shown except as noted below DISCREPANCY OF +/- .05% JTC045/005.4 - ACTUAL DELIVERED WEIGHT OF 43,520 LBS. JTC045/006.0 - ACTUAL DELIVERED WEIGHT OF 43,920 LBS.			
	47. FOR THE FTZ OPERATOR (Signature)	48. TITLE	49. DATE	

(Paperwork Reduction Act Notice on Reverse)

Customs Form 214 (020691)

AB0000018572

AMS

REF: 973242
19 CFR 10.60, 10.61, 18, 123.41, 123.42

TRANSPORTATION ENTRY AND MANIFEST OF GOODS SUBJECT TO CUSTOMS INSPECTION AND PERMIT

403

Form Approved
OMB No. 1515-0005

I.T. Entry No. **V13-22010763**
Port **HOUSTON, TEXAS**
Date **6/9/97**


UNITED STATES CUSTOMS SERVICE

Dist. No. **20** Port Code No. **02** First U.S. Port of Unloading **HOUSTON, TEXAS**
Port of **NEW ORLEANS, LA.** Date **6/19/97**

Entry No. **313,963,576**

Class of Entry **I.T. (61)**
(LT, Wd.T., Wd.Ex., T.E., Drawback, etc.)

Entered or imported by **CEDAR CHEMICAL CORPORATION** to be shipped
in bond via **TRIPLE E TRANSPORT** BOND No. **209100312** consigned to
(CHL Number) (Vessel or carrier) (Car number and initial) (Pier or station)
District Director of Customs At **2006 MEMPHIS, TN** Final foreign destination
(For exportations only)
Consignee **CEDAR CHEMICAL CORP. FTZ 14B HIGHWAY 242 SOUTH WEST HELENA, ARKANSAS 72390**
(At customs port of exit or destination)
Foreign port of lading **LE HAVRE** B/L No. **TRIPLE E 18721278875** Date of sailing **5/24/97**
(Above information to be furnished only when merchandise is imported by vessel)
Imported on the **S/S SEA-LAND PERFORMANCE** Flag **US** on **6/9/97** via **DIRECT**
(Name of vessel or carrier and motive power) (Date imported) (Last foreign port)
Exported from **FRANCE** on **5/24/97** Goods now at **AVONDALE CONTAINER YARD WEST**
(Country) (Date) (Name of warehouse, station, pier, etc.)

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
UTCU-457005-4 UTCU-457006-0	2 (20') TANK CONTAINERS: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II SECURITY SHEET: 6.1 - 04 M.F.A.G. TABLE: 370 EMERGENCY TELEPHONE: (800) 424-9390 HTSUS 2929.10.3000 C/O FR MF: FRRHOAGRI420LYO	102778	204750	EST. NOT VERIFIED	
	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> FTZ 14B DIRECT DELIVERY PROGRAM 6/23/97  SIGNATURE </div>				

G.O. No. _____

CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND
AND/OR LADING FOR EXPORTATION FOR

2006 MEMPHIS, TENNESSEE
(Port)

WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-DESCRIBED GOODS WERE:

Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals

Laden on the—
(Vessel, vehicle, or aircraft)

which cleared for—

on—
(Date)

as verified by export records
(Inspector)

(Inspector or warehouse officer)

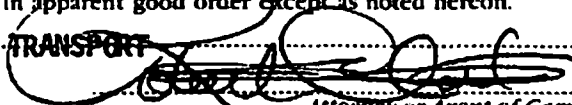
(Date)

I truly declare that the statements contained herein are true and correct to the best of my knowledge and belief.

Entered or withdrawn by
CEDAR CHEMICAL CORPORATION
by **PHILBIN, CAZAVAS & ST. JOHN, INC. Atty in fact**

To the Inspector or Warehouse Officer: The above-described goods shall be disposed of as specified herein.

For the District Director of Customs:
Received from the District Director of Customs of above district the merchandise described in this manifest for transportation and delivery into the custody of the customs officers at the port named above, all packages in apparent good order except as noted hereon.

TRIPLE E TRANSPORT

Attorney or Agent of Carrier

**RHÔNE-POULENC AGRO**

14-20, RUE PIERRE BAIZET B.P. 9163
69263 LYON CEDEX 09 - FRANCE
TEL. 04 72 85 25 25 - FAX 04 72 85 27 89
TLX 310 088 F RHÔNE
N° IDENTIFICATION TVA - FR 63 969 603 309

INVOICE NO: 60115049 DATED: 23.05.1997
DATE: 05.01.91

CONSIGNEE: USCEPAR
CEPAR CHEMICAL CORPORATION
ATTN: BOB CHRISTIAN
HWY 242 SOUTH
AR 72390 WEST HELENA
UNITED STATES

INVOICEE: USCEPAR
CEPAR CHEMICAL CORPORATION
ATTN: BOB CHRISTIAN
P.O. BOX 2749
AR 72390 WEST HELENA
UNITED STATES

U/REF: 01 4013246270010
Y/REF: 04050577
SHIPPING BY: JET
TERMS OF DELIVERY: 90 DAYS INVOICE DATE
TERMS OF PAYMENT: 90 DAYS INVOICE DATE
PAYMENT DATE: 21.03.1997
PAYMENT MODE: TELEGRAPHIC TRANSFER
CURRENCY: USD

LOC: NEW ORLEANS

PRODUCT CODE: 1052.70.11
CUST. MATERIAL NO: 3.4 POLY ETHER
QUANTITY: 10200.00 LB
UNIT PRICE: 6.25 USD PER LB
AMOUNT: 634.050.00 USD

CH N°: 22291096

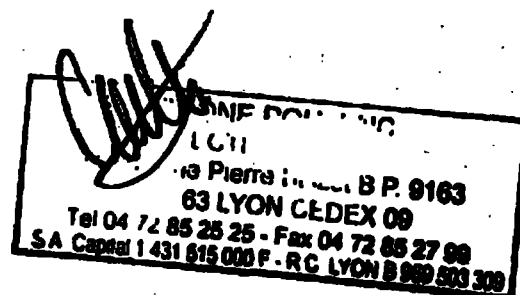
MARKING: MARQUE POULENC AGRO
CEPAR / USA
H.W.....
G.W.....
N.P.....

TOTAL TO BE PAID:

634.050.00 USD

EXONERATION TVA ART. 263 DE LA LOI GENERAL DES IMPOTS

TELEGRAPHIC TRANSFER OR SWIFT TO SOCIETE GENERALE LYON GRANDES
ENTREPRISES - ACCOUNT NUMBER 260107826
IBAN: FR 63 969 603 309 0000 0000 0000 0000



AB0000018572

CENSUS USE ONLY

DEPARTMENT OF THE TREASURY
UNITED STATES CUSTOMS SERVICEAPPLICATION FOR
FOREIGN-TRADE ZONE ADMISSION
AND/OR STATUS DESIGNATION

19 CFR 146.22, 146.32, 146.35-146.37, 146.39-146.41, 146.44, 146.53, 146.68

1. ZONE NO. AND LOCATION (Address)

FOREIGN TRADE ZONE No. 2
NAPOLEON AVENUE WHARF
NEW ORLEANS, LA.

2. DISTRICT/PORT CODE

20 - 02 NEW ORLEANS, LA.

3. IMPORTING VESSEL (& FLAG)/OTHER CARRIER

(MX) M/V NUEVO LEON V.30W

4. EXPORT DATE

5/17/97

5. IMPORT DATE

6/7/97

6. ZONE ADMISSION NO.

23971

7. U.S. PORT OF UNLADING

NEW ORLEANS, LA.

8. FOREIGN PORT OF LADING

LE HAVRE

9. BILL OF LADING/AWB NO.

TEMULHNLN30W0628

10. INWARD M'FEST NO.

N/A

11. INBOND CARRIER

N/A

12. I.T. NO. AND DATE

N/A

13. I.T. FROM (Port)

N/A

14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT?

☐ YES☐ NO

15. NO. OF PACKAGES AND COUNTRY OF ORIGIN	16. DESCRIPTION OF MERCHANDISE	17. HTSUS NO	18. QUANTITY (HTSUS)	19. GROSS WEIGHT	20. SEPARATE VALUE & AGGR CHGS.
7 C/O FR 1	(20') TANK CONTAINERS: 3,4-DICHLOROPHENYLISOCYANATE (3,4-DCPI) TOXIC LIQUID HAZARDOUS CARGO CLASS 6.1 UN 2250 P.G. II EMERGENCY TELEPHONE: (800) 424-9390	2929.10.3000	132200 KG	159760 KG	\$694,050.CI \$10,150.ND \$683,900.FO
21. HARBOR MAINTENANCE FEE (19 CFR 24.24) <input type="checkbox"/>					\$854.88

22. I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 146.31, Customs Regulations.

23. I hereby apply for the status designation indicated:

☒ NONPRIVILEGED FOREIGN
(19 CFR 146.42)☐ PRIVILEGED FOREIGN
(19 CFR 146.41)☐ ZONE RESTRICTED
(19 CFR 146.44)☐ DOMESTIC
(19 CFR 146.43)

24. APPLICANT FIRM NAME

CEDAR CHEMICAL CORPORATION

25. BY (Signature)

PHILBIN, CAZALAS & ST. JOHN INC. Atty in fact

26. TITLE

27. DATE

6/10/97

F.T.Z. AGREES TO RECEIVE
MERCHANDISE INTO THE ZONE

28. FOR THE F.T.Z. OPERATOR (Signature)

29. TITLE

30. DATE

6/11/97

PERMIT

Permission is hereby granted to transfer the above merchandise into the Zone.

31. DISTRICT DIRECTOR OF CUSTOMS: BY (Signature)

32. TITLE

33. DATE

6/11/97

PERMIT

The above merchandise has been granted the requested status.

34. DISTRICT DIRECTOR OF CUSTOMS: BY (Signature)

35. TITLE

36. DATE

6/11/97

37. The goods described herein are authorized to be transferred:

☒ without exception☐ except as noted belowPERMIT
TO
TRANSFER

38. CUSTOMS OFFICER AT STATION (Signature)

39. TITLE

40. STATION

41. DATE

42. RECEIVED FOR TRANSFER TO ZONE (Driver's Signature)

43. CARTMAN

44. CHL NO.

45. DATE

6/10/97

46. To the District Director of Customs: The above merchandise was received at the Zone on the date shown except as noted below.

CCR4 1970 79-6 FR2076 SIDE SIDE DENT

FTZ
OPERATOR'S
REPORT OF
MERCHANDISE
RECEIVED
AT ZONE

AUDIT INSPECTOR FTZ #2

47. FOR THE FTZ OPERATOR (Signature)

48. TITLE

49. DATE

6-13-97

(Paperwork Reduction Act Notice on Reverse)

Customs Form 24 (02/99)

AB0000018572

TOLOCHIMIE

ADRESSER VOTRE CORRESPONDANCE A :

TOLOCHIMIE - Impasse PALAYRÉ
B P 1196 - 31037 TOULOUSE CEDEX 1
TÉL 05 61 31 78 78
TÉLÉCOPIE : 05 61 31 78 50

N / REF : MF /ML

DATE 16-Mai-97

CEDAR

COMMANDE N° 401 27462
EXPEDITION N° 438
DU 16 Mai 97

CAMION CITERNE N°
CONTAINER N° UTCU 457.005.4
WAGON N°

N° DE LOT DU PRODUIT B303A/16.5.97.5

N° DE LOT DU CONDITIONNEMENT
(s' il y a lieu)

CERTIFICAT D'ANALYSE DU 3,4-DICHLOROPHENYLISOCYANATE

Nous certifions que le produit ci-dessus a la composition suivante :

M E T H O D E	Détermination	Valeur	Unité	Spécification	Méthode d'analyse Tolochimie
1	aspect	conforme		solide blanc	Visuelle
2	3,4-dichlorophénylisocyanate	99.6	%	> 98.5	To 10.27.88
2	2,3-dichlorophénylisocyanate	0.23	%	pour information	To 10.27.88
2	3-chloro + 4-chlorophénylisocyanate	0	%	pour information	To 10.27.88
2	monochlorobenzène	0.01	%	< 0.2	To 10.27.88
2	semi-lourds	0.15	%	< 0.8	To 10.27.88
autre	0	0	%		To 10.27.88
autre			%		

principe de la méthode:

1	visuelle
2	C.P.G
autre	
autre	



LE RESPONSABLE DU CONTROLE ANALYTIQUE

AB0000018572

1.645

Drum - FOB - 30 Day

- .04[#]

180 - 30 Days Terms

- .05[#]

Bulk Vs Drums

+ .06[#]

150 LEASE + O.F.

+ .225[#]

Duty

1.84

FOB - NOLA - Duty Pd - 30 NOLA
NET INV.

CEDAR CHEMICAL CORPORATION

PURCHASE ORDER

No. 04-087455

THIS NUMBER MUST APPEAR ON
ALL INVOICES, PACKING SLIPS,
PACKAGES & CORRESPONDENCE

Acknowledge and Invoice to:

CEDAR CHEMICAL CORPORATION
P. O. BOX 2749
WEST HELENA, AR 72390

DATE 9/09/97 PAGE 1

REQUISITIONER CHRISTIAN

V
E
N
D
O
RBAYER CORPORATION
P. O. BOX 75662
CHARLOTTE, NC

28275-5662

S
H
I
P
T
OCEDAR CHEMICAL CORPORATION
HWY 242
WEST HELENA, AR 72390THIS OFFER TO PURCHASE IS MADE ONLY ON THE EXPRESS CONDITION THAT SELLER ACCEPTS ALL THE TERMS AND CONDITIONS ON
THE REVERSE SIDE HEREOF AND ANY SUPPLEMENTAL CONDITIONS ATTACHED HERETO.

SHIP FROM		FOB		FREIGHT TERMS		PPD COL	VENDOR NO
		DUTY PD-NOLA		BUYER			02987 - 04
SHIP VIA		Required Delivery Date		PAYMENT TERMS		TAX PERMIT NO	
		10/13/97		NET 30 DAYS / NOLA Arrival			
ITEM	QUANTITY	UNIT	INVENTORY NO	DESCRIPTION	GL ACCOUNT NO	UNIT PRICE	
	REG. NO. 14692 BY 20 1,200,000	LBS	CHRISTIAN	3,4 DCA	C 153 5910	1.64 LBS	
<p>TO BE SHIPPED FROM GERMANY IN 150-TANKS 20 M/T EACH - TOTAL OF 28 TANKS. ARRIVAL NEW ORLEANS AS FOLLOWS:</p> <p>2=W/O 10/17, 2=W/O 10/28, 3=W/O 11-10, 2=W/O 11/2, 2=W/O 11/28, 2=W/O 11/29, 3=W/O 12-6, 2=W/O 12/13, 2=W/O 12/20 3=W/O 12/29, 2=W/O 12/22, 2=W/O 12/27</p> <p>CEDAR MUST PAY FOR RETURN OF MT TANK TO NOLA DEPOT.</p>							
*** CONFIRMATION ***							

VENDOR COPY

BY


 AUTHORIZED SIGNATURE

AB0000006235

COMMUNICATION RESULT REPORT

501 572 3795

CEDAR CHEMICAL CORP.

09-11-97 03:56PM

FILE	DATE & TIME	FILE TYPE	DELAYED	DESTINATION/TO:/FROM:	PAGE	REMARKS	SIZE
31	09-11 03:52PM	MEMORY-S		TO : CEDAR MEMPHIS	01		0023

NO.	PHONE / TTI NO.	COMM MODE	RESULT	NO.	PHONE / TTI NO.	COMM MODE	RESULT
001	001: CEDAR MEMPHIS		GOOD				

CEDAR CHEMICAL CORPORATION

Acknowledge and Invoice to:

CEDAR CHEMICAL CORPORATION
P. O. BOX 2749
WEST HELENA, AR 72390

DATE 9/09/97 PAGE 1

REQUISITIONER CHRISTIAN

BAYER CORPORATION
P. O. BOX 75662
CHARLOTTE, NC

CEDAR CHEMICAL CORPORATION
HWY 242
WEST HELENA, AR 72390

28275-3662

THIS OFFER TO PURCHASE IS MADE ONLY ON THE EXPRESS CONDITION THAT SELLER ACCEPTS ALL THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF AND ANY SUPPLEMENTAL CONDITIONS ATTACHED HERETO

SHIP FROM		FOU		FREIGHT TERMS		VENDOR NO	
SHIP VIA		DUTY PD-NOLA		BUYER		02987 - 04	
		Required Delivery Date		PAYMENT TERMS		TAX PERMIT NO.	
		10/13/97		NET 30 DAYS / NOLA Arrival			
ITEM	QUANTITY	UNIT	INVENTORY NO.	DESCRIPTION	G.I. ACCOUNT NO	UNIT PRICE	
REG. NO. 14692 20	1,200,000	BY LBS	CHRISTIAN	3,4 DCA	C 153 5910	1.64 LBS	
<p>TO BE SHIPPED FROM GERMANY IN 150-TANKS 20 M/T EACH - TOTAL OF 28 TANKS. ARRIVAL NEW ORLEANS AS FOLLOWS:</p> <p>2=W/O 10/13, 3=W/O 10/20, 3=W/O 10/27, 2=W/O 11/3, 2=W/O 11/10, 2=W/O 11/17, 3=W/O 11/24, 2=W/O 12/1, 2=W/O 12/8, 3=W/O 12/15, 2=W/O 12/22, 2=W/O 12/29</p> <p>CEDAR MUST PAY FOR RETURN OF MT TANK TO NOLA DEPOT.</p>							
*** CONFIRMATION ***							

AB0000006235

Revision A

PURCHASE REQUISITION

No 14692

CEDAR CHEMICAL CORP.
WEST HELENA PLANTDATE 9/5/97REQUIRED
DELIVERY DATE 10/13/97PURCHASE
ORDER NO. 04-087455PURPOSE _____ ACCOUNT NO. COI-53-5910

ITEM	QUANTITY	UNIT	DESCRIPTION AND CODE	PRICE/UNIT
	1,200.00	#	3.4 DCA	1.84/#
			TO BE SHIPPED FROM GERMANY IN	
			150-TANKS 20 MT EACH - TOTAL OF	
			28 TANKS.	
			ARRIVAL - NEW ORLEANS AS FOLLOWS	
			2 = W/O 10/13	
			3 = W/O 10/20	
			3 = W/O 10/27	
			2 = W/O 11/3	
			2 = W/O 11/10	
			2 = W/O 11/17	
			3 = W/O 11/24	
			2 = W/O 12/1	
			2 = W/O 12/8	
			3 = W/O 12/15	
			2 = W/O 12/22	
			2 = W/O 12/29	
			CEDAR MUST PAY FOR RETURN OF MT TANK	
			TO NOLA DEPOT.	

SUPPLIER

BAYER CORP

TERMS N30 - INVOICEFOB Duty Pd - NOLAFREIGHT FOR ACCOUNT OF
☒ BUYER ☐ SELLER

SHIP VIA _____

PPD/COLLECT _____

ISSUED BY

APPROVED BY

Andy 412-777-2512

FRT COI-53-5920



5100 Poplar Avenue • Suite 2414 • Memphis, TN 38137 • (901) 685-5348 • Fax (901) 684-5398

CEDAR INTERNAL CORRESPONDENCE

Date: August 26, 1997

To: Neil Robbins
~~555-0111-1111~~

From: Randal Tomblin
JRT-20-97

cc: C. McGee
J. Whitsitt
J. Hanna
E. White

Subject: DCA Purchases *jet*

As we pick up steam on production for Riceco, we will be a net purchaser of DCA from Bayer.

In order to minimize cost to Riceco (freight and import duty) and to Cedar (for DCA shipped to Europe for diuron production on behalf of Cedar or Federssen), please establish necessary tracking procedures to:

- Ensure that the net cost of all DCA purchased or traded from any source is used to calculate the propanil transfer prices to Riceco.
- Ensure that the costs of DCPI and diuron are calculated using Cedar DCA cost regardless of the source of the DCA.
- Do not drum any DCA for shipment unless and until I have been consulted on the matter.

If you have any questions, please call.

Randal

AB0000006235

COMMUNICATION RESULT REPORT

501 572 3795

CEDAR CHEMICAL CORP.

09-15-97 02:44PM

FILE	DATE & TIME	FILE TYPE	DELAYED	DESTINATION/TO:/FROM:	PAGE	REMARKS	SIZE
21	09-15 02:42PM	MEMORY-S		TO :14127774109	02		0040

NO.	PHONE / TTI NO.	COMM MODE	RESULT	NO.	PHONE / TTI NO.	COMM MODE	RESULT
001	14127774109		GOOD				

SEP 15 '97 12:58PM BAYER ORGANIC CHEM 412 777 4109

P.1/3

Bayer

Telefax

Industrial Chemicals Division
Organic Chemistry

Date:	<u>9/15/97</u>	Pages:	<u>02</u>
From:	<u>Bob Christian</u>	To:	<u>Andy Vannatta</u>
Company:	<u>Cedar Chemical</u>	Company:	<u>Organic Chemicals</u>
Fax:	<u>870-572-3795</u>	Fax:	<u>(412) 777-4109</u>
Phone:	<u>870-572-3701 X 227</u>	Phone:	<u>(412) 777-2512</u>

Re: 3.4 DCA.

Attached is a questionnaire sent to us by Bayer AG in Germany.

Please arrange to have this filled out & returned to me as soon as possible.

Thanks

Andy.



Telefax**Industrial Chemicals Division
Organic Chemicals**

Date: 9/15/97 Pages: 2
From: Bob Christian To: Andy Vannatta
Company: Cedar Chemical Company: Organic Chemicals
Fax: 870-572-3795 Fax: (412) 777-4109
Phone: 870-572-3701 X 227 Phone: (412) 777-2512

Re: 3.4 DCA.

Attached is A questionnaire sent to us by Bayer AG in Germany.

Please Arrange to have this filled out & returned to me as soon as possible.

Thanks

Andy.

Also attached is a copy of a letter sent to Randall Tomblin on this product for your info & file.

NOTICE OF CONFIDENTIALITY

The information contained in and transmitted with this facsimile is confidential and/or exempt from disclosure under applicable law. It is intended only for the individual or entity named above. You are hereby notified that any dissemination, distribution, copying, or use of or reliance upon the information contained in and transmitted with this facsimile by or to anyone other than the recipient designated above by the sender is UNAUTHORIZED and STRICTLY PROHIBITED. If you have received this facsimile in error, please immediately call Bayer Corp. collect at (412) 777-2512 so that we can arrange for the return of the original facsimile at our cost. Thank you.

Requirements - Discharge of Tankcontainers -

Please, return to: MD-ZL/Overseas-Traffic Department
Leverkusen, Geb. B181, R305
Attn. Mr. Kunz / Mr. Simon
Phone: 49/214-30-27795 or 88188; Fax: 49/214-30-61999

General Information:

product: 3,4 Dichloro Anilin article no.:
plant of discharge: WEST HELENA plant manager: Bob CHRISTIAN
ARR - 72390 phone: 501-572-3701 - x 227

Questions:

- Have you ever discharged tankcontainers with this product? ☐ yes ☒ no
- product-temperature / discharge: approx. from 80 up to 85 °C.
- time of discharge, estimated: approx. from 1 up to 2 hours.
- office hours: ☒ Monday to Friday ☐ Saturday ☐ Sunday, public holiday
time: 8 AM until 5 PM.

- How can the tankcontainer be discharged?
 - ☐ air valve (top) ☒ connective-diameter: 3/4"
thread:
coupling: Chicago
FOR NITROGEN PRESSURE
 - ☐ bottom outlet ☒ connective-diameter: 2"
thread:
coupling: XX
QUICK CONNECT TYPE
 - ☐ vapor recovery line ☒ connective-diameter:
thread:
coupling:

- syphon pipe required? ☐ yes ☒ no
- heating? ☒ steam ☐ electrical
- special equipment or procedures required?

GESAMT R.41

GESAMT SEITEN 02



Industrial Chemicals Division

Organic Chemicals

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-9741
Phone: 412 777-2000

September 5, 1997

Mr. Randall Tomblin
CEDAR CHEMICAL
5100 Poplar Avenue
Suite 2414
Memphis, TX 38137

RE: 3,4-Dichloroaniline

Dear Randy:

We refer to your purchase order #04087455 for 540mt of 3,4-Dichloroaniline. We have informed Bayer AG accordingly, and based on undisturbed production, they plan to ship the material as per the schedule given to us by Mr. Bob Christian.

We have some good news; namely, we have been able to achieve one way containers and therefore the price that we will invoice you for these 540mt in isocontainers would be 5 cents/lb less than what we had previously indicated. The new price would be \$1.84/lb ex dock, New Orleans, duty paid. Please note that the terms of payment are 30-days net from the date of invoice. Also, regarding these isocontainers, the total number of allowable days for unloading and return of these containers are 10 days from the date of vessel arrival. There would be a \$35 per day demurrage charge beyond the total 10 days period which, of course, would have to be born by you.

If you have any questions, please give me a call. Thank you.

Very truly yours,

Shewak Hingorani

cc: Mr. D. Petersen
CMC, AV
SHEH/A/RT

CEDAR CHEMICAL CORPORATION
Journal Voucher

[illegible]

WENT TO
HUNGARY

Bayer - DCA

Load 1

	Date	Inv #	Drms	Net	Lbs	US\$	Per # Price
DCA Purchase	8/26/97	3033154	78	551	42,978	70,698.81	1.645
DCA Purchase	8/26/97	3033169	78	551	42,978	70,698.81	1.645
Ocean Freight							0.000
Ocean Freight							0.000
Duty	10/22/97	41000 Gilscot				1,885.00	0.044
Duty							0.000
Inland Freight	9/3/97	64778 Inter Sea Port Service				3,523.19	0.082
Total Cost delivered to Drexal						146,805.81	3.416

Accounting:		\$ Dollars	Unit Cst
C153-5910		141,397.62	
C153-5920		5,408.19	
Total	85,956	146,805.81	1.708

03.03.97

12:41

INTER SEA-PORT SERVICE

0048878898

P-02

001

15028

inter sea port service

speditionsgesellschaft mbh

inter sea port service gmbh, Postfach 120341, 27601 Bremerhaven

GILSCOT-GUIDROZ INTERNATIONAL
Attn. Keith Guidroz
2815 Division Street, Suite 202

METAIRIE, LA 70002 USA

Fax 001 504 887 8898

Neue Postleitzahl:

Postfach 12 03 41

27617 Bremerhaven

27601 Bremerhaven-Kaiserhafen

Postfach 120341, Franzluisstr. 54

Telefon (0477) 412043

Telefax (0477) 412545

Tele 226 720

USA-Int. 0014700000

Bankverbindungen:

Gosensänder Bank AG, Bremerhaven

(BLZ 60220051)

DM Kto. 42300001

US & Kto. 142000000

Bredner Bank, Bremerhaven

(BLZ 26220011) Kto. 4070047000

Rechnung/Invoice No.: 1ps064 778

Datum: 3. sept.

156 Drums with Dichloroanilines Solid Toxic 0,1
each 600 lbs gross from Bayer, Leverkusen/Germany
loaded 28.29. Aug. 97 to E.M.V. North Hungarian
Chemical Works, H. 3792 Sajobahony/Hungary
etc 1.sept. and 3. Sept. 97

ex free loaded on our two Trucks at
Bayer, Leverkusen, and transport in Bond
to E.M.V. North Hungarian, Sajobahony/Hungary
as estimated per Truck DM 2960,-

ENTERED

OCT 3 1 1997

WEST HELENA

DM 5960,00

VENDOR #		INVOICE #	
15250		064 778	
P.O. #	REC RPT #	INV CD	INV. DATE
		1	090397
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
N			
INVOICE AMT.		DISC. ALLOWED	
328.000 3523.19			
GL NUMBER	AMOUNT	WORK ORDER #	
01535920	3260.40		
	3523.19		
DATE		APPROVED BY	
10.09.97		GFW	
ENTERED BY			
RK			

AB0000079534



ILSCOT - GUIDROZ INTERNATIONAL

FMC NO 4054

MEMBER OF NATIONAL BROKERS & FORWARDERS
ASSOCIATION OF AMERICA

2815 DIVISION STREET
SUITE 202
METAIRIE, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898

TO: CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

INVOICE # 41000

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE

OUR REFERENCE	DATE	YOUR REFERENCE		
41000	10/22/97	BAYER CORPORATION PITTSBURGH PA.		
CARRIER	ON BOARD DATE	PORT OF LOADING	PORT OF DISCHARGE	ETA
"NEDLOED HOLLAND"	/ /	ROTTERDAM	NOLA	10/12/97
BILL OF LADING NO:		COMMODITY:		
		2X20 FT ISOTANKS FROM ROTTERDAM		

TO NOLA 3,4DICHLOROANILINE

ENCLOSURES	ORIG.	COPY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING			AIR/OCEAN FREIGHT	
INS. CERTIFICATE			INLAND FREIGHT	
CONSULAR INVOICE			DRAYAGE/PORT SERVICES	
COMMERCIAL INVOICE			INSURANCE	
			CONSULAR FEES	
			DOCUMENT EXPRESS	
			OTHER	

ENTERED

OCT 31 1997

WEST HELENA

VENDOR #		INVOICE #	
12347		41000	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
		1	102297
TERMS CODE	DUE DATE	FRY. BILL CD	SALES ORDER #
N			
INVOICE AMT.		DISC ALLOWED	
1885.00			
GL NUMBER	AMOUNT	WORK ORDER #	
01535920	1885.00		
DONE BY		DATE	APPROVED BY
RK		10-28-97	[Signature]
		ENTERED BY	

930.00
930.00
25.00

\$ 1885.00

VE YOU.

SED AND A TRUE COPY OF EACH PERTINENT DOCUMENT
T OF ANY REBATE DIRECTLY, OR INDIRECTLY.

AB0000079534

**FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205**

INVOICE/ORDER ACKNOWLEDGEMENT NO:3033154 DATE: 08-26-97 CO-21 DIV-10 DP-0012
BILL TO: 005761-001 EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY **61**

61

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR ACCOUNT.

PURCHASE ORDER #:04-077214
FOB:LEVERKUSEN.

ORDER INVOICE NO: 3033154 DATE: 08-26-97
FREIGHT: COLLECT DATE SHIPPED: 08-26-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	42,978.00	1.64500	70,698.81
080081	06Y63448	78 %	551.00 LB	DRUM (1751)	

SPECIAL PRICING APPLIES

06Y63448

VENDOR #						INVOICE #																													
2987						3033154																													
P.O. #				REC. RPT. #				INV. CD				INV. DATE																							
77214								1				082697																							
TERMS CODE						DUE DATE						FRT. BILL CD.						SALES ORDER #																	
3																																			
INVOICE AMT.												DISC. ALLOWED																							
70,698.81																																			
GL NUMBER												AMOUNT												WORK ORDER #											
C 153 5910												70,698.81																							
DONE BY						DATE						APPROVED BY						ENTERED BY																	
RK						9-23-97						CMW						A																	

DE 70,698.81

de NR

* * *

LAST PAGE
CORPORATION

★★0099

**IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
IF SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE**

poration, Pittsburgh, PA 15205-0741

61

Corporation, Pittsburgh, PA 15206-9741
AB0000079534



Telefax**Industrial Chemicals Division
Organic Chemicals**

Date:	<u>10/14/97</u>	Pages:	<u>5</u>
To:	<u>Bob Christian</u>	From:	<u>Andy Vannatta</u>
Company:	<u>Cedar Chemical</u>	Company:	<u>Organic Chemicals</u>
Fax:	<u>870-572-3795</u>	Fax:	<u>(412) 777-4109</u>
Phone:	<u>870-572-3701 X227</u>	Phone:	<u>(412) 777-2512</u>

Re: 3.4 DCA.

Attached is a copy of our brokers instructions covering two containers of 3.4 DCA expected to arrive in New Orleans on 10/17.

Please note that we have not assigned carrier. We need to discuss this item.

We are also attaching the analysis for each of these shipments.

Our reference nos 06Y63627 + 63628

NOTICE OF CONFIDENTIALITY

The information contained in and transmitted with this facsimile is confidential and/or exempt from disclosure under applicable law. It is intended only for the individual or entity named above. You are hereby notified that any dissemination, distribution, copying, or use of or reliance upon the information contained in and transmitted with this facsimile by or to anyone other than the recipient designated above by the sender is UNAUTHORIZED and STRICTLY PROHIBITED. If you have received this facsimile in error, please immediately call Bayer Corp. collect at (412) 777-2512 so that we can arrange for the return of the original facsimile at our cost. Thank you.

FRITZ COMPANIES, INC.
101 DELTA DRIVE/SUITE 8
ST. ROSE, LA 70087
FAX: 504-466-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15203-8741
Phone: 412 777-2000

SEPTEMBER 30, 1997

BAYER ORDER # : SEE ATTACHED
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO : SEE ATTACHED
VESSEL : NL HOLLAND
BL # : STOLT SNN971842
CONTAINER # : SEE ATTACHED
NET WGT : SEE ATTACHED
PORT OF LOADING : ROTTERDAM
PORT OF ARRIVAL : NEW ORLEANS

ARRIVAL DATE : 10/17/97

09/26/97

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

SEE ATTACHED

MAKE I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 25-1339219B0)

TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :

H.S. # : SEE ATTACHED

RATE : SEE ATTACHED

CAS # : SEE ATTACHED

PLEASE ISSUE DELIVERY ORDER(S) TO :

CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :

CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :

NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS. CUSTOMER
REQUESTED CARRIER IS TRIPLE E TRANSPORT.

CC: CEDAR CHEMICAL CORP
XX, LOG, AV, JB

—ATTACHMENTS—

JENNIFER HOLUB (JH)
412-777-2158



CUSTOMER : CEDAR CHEMICAL CORP
SHI1021035-1
10/17/97
CUSTOMER PO:

NL HOLLAND
STOLT SHN971842
NET: 19040.00 KG

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-9741
Phone: 412 777-2000

BAYER PO# : 06Y63628 PRODUCT : N826 CONT CD : 99 NWGT : 19040.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

41,975 lbs

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

CUSTOMER : CEDAR CHEMICAL CORP
SHI1021063-9
10/17/97
CUSTOMER PO: 04-087455

NL HOLLAND
STOLT SHN971842
NET: 19180.00 KG

BAYER PO# : 06Y63627 PRODUCT : N826 CONT CD : 99 NWGT : 19180.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

42,284 lbs

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

(2)

AB0000006244

061/062
PAGE 1 END
DATE 02.10.97

BAYER CORPORATION

5A1U 121035-1

04-087455

DATE OF RELEASE: 24.09.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

MARKS:

BAYER
04-087455
NEW ORLEANS
06Y63628 N626
3,4 DICHLOROBENZILATE, PURE
GROSS 22200 KG
NET 19040 KG
MADE IN GERMANY
N626 01/11/96

CONTAINER-NO. :
SNUJL21028-1

DR. SIEGENDT

RAW MATERIAL RECEIVING RECORD

No 10793

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

1516

RECEIVED BY

J. Williams

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DESIRED WEIGHT
10-18-97	04-087456	SMU 1210639	Net 38.280

SHIPPER

Bayer Corporation

CARRIER

Truck 2

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	2/C	unit 6	3020	DCA

COMMENTS

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
PF	✓		

COMMENTS

COA 99.7% p.i. .03 H₂O

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
J. J. J.	✓		

PLANT WEIGHT

UNLOADING TIMES

NET

START TIME

END TIME

COMMENTS

Drops continuing to be off loaded later

RAW MATERIAL RECEIVING RECORD

№ 10783

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

1516

RECEIVED BY

J. Williams

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
10-18-97	44-007456	WILLIAMS	Net 35 280

SHIPPER

Bayer Corporation

CARRIER

Trans 2 42284

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	5/L	with	3030	DCA

COMMENTS

/

SECTION 2

TIME SAMPLED	DATE TAKEN TO LAB

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

REASON FOR REJECTION	REASON FOR REJECTION
P F	L

COMMENTS

COA 77.7% H₂O

SECTION 4

PLANT WEIGHT	UNLOADING TIMES
<i>J. Jones</i>	

PLANT WEIGHT

UNLOADING TIMES

NET

START TIME

END TIME

COMMENTS

Drop entering to be off loaded later

RAW MATERIAL RECEIVING RECORD

No 10792

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0630

RECEIVED BY

DLW

SECTION 1

DATE ORDER NO. CAT OF TRUCK NO. DECLARED WEIGHT

10/18/97 04-087455 SMTU 1210351 Net 15120KG

SHIPPER

Bayer

CARRIER

Triple E

41976

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit 6	3020	OCA

COMMENTS

C of A was faxed

SECTION 2

RECIPIENT TIME SAMPLE CERTIFICATE TAKEN TO LAB

MW 6:55

UNLOADED AT (tank number, unit, warehouse, etc.)

dump unit 6 T611P

COMMENTS

clipped it out for 12/12

SECTION 3

LAB TECHNICIAN ANALYST REPORTED RESULTS

TLP X

COMMENTS

SECTION 4

PLANT WEIGHT UNLOADING TIMES

9760 X

PLANT WEIGHT

UNLOADING TIMES

NET START TIME END TIME

COMMENTS



Industrial Chemicals Division

Organic Chemicals

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-9741
Phone: 412 777-2000

September 5, 1997

Mr. Randall Tomblin
CEDAR CHEMICAL
5100 Poplar Avenue
Suite 2414
Memphis, TX 38137

Bob Christian
Neil Robben

RE: 3,4-Dichloroaniline

Dear Randy:

We refer to your purchase order #04087455 for 540mt of 3,4-Dichloroaniline. We have informed Bayer AG accordingly, and based on undisturbed production, they plan to ship the material as per the schedule given to us by Mr. Bob Christian.

We have some good news; namely, we have been able to achieve one way containers and therefore the price that we will invoice you for these 540mt in isocontainers would be 5 cents/lb less than what we had previously indicated. The new price would be \$1.84/lb ex dock, New Orleans, duty paid. Please note that the terms of payment are 30-days net from the date of invoice. Also, regarding these isocontainers, the total number of allowable days for unloading and return of these containers are 10 days from the date of vessel arrival. There would be a \$35 per day demurrage charge beyond the total 10 days period which, of course, would have to be born by you.

If you have any questions, please give me a call. Thank you.

Very truly yours,


Shewak Hingorani

cc: Mr. D. Petersen
CMC, AV
SHH134/RT

3311850

3311850

25-07-97 10:45AM

[87] #1

WESTRADE

**WESTRADE USA INC.**10350 Westheimer, Suite 230 • HOUSTON, Texas 77042
Phone: (713) 785-0053 Telex: 796110 Post: (713) 977-5727

CEDAR CHEMICAL
HWY 242 SOUTH WEST
HELENA, ARKANSAS 72380
U.S.A.
ATT: BOB CHRISTIAN

AUG 18 1997

HELENA

COMMERCIAL INVOICE**NO 00719**

DATE:

31-Jul-96

TERMS OF SALE: UPON RECEIPT

DCA
6 X 40'

INVOICE No.		SHIPPED VIA		TOTAL PROGS		YOUR ORDER No.		YOUR REQ. No.	
		BY SEA		TOTAL WTS: 551.15 LB EA					
ITEM No	QTY ORDERED	QTY BACK ORDER	QTY SHIPPED	DESCRIPTION			UNIT PRICE	TOTAL	
				FREIGHT CHARGES ON 6 X 40' CONTAINERS WITH 80 DRUMS EA OF DCA TOTAL: 284552 LB					
				TERMS: UPON RECEIPT					
				INLAND FREIGHT FROM TECUN UMAN EMALA ELENA, AR.					

*gas for DCA
they board us
last storm*

VENDOR #		INVOICE #	
32516		719	
PO #	REC. RPT #	INV. CO	INV. DATE
			073196
TERMS CODE	DUE DATE	FRT BILL CO	SALES ORDER #
A			
INVOICE AMT.		DISC. ALLOWED	
16,441.07			
GL NUMBER	AMOUNT	WORK ORDER #	
C153 5920	16,441.07		
DATE		APPROVED BY	
8-6-97		(m)	
ENTERED BY			
RK			

\$ 5,080.00
\$ 11,411.07
\$ 16,441.07

*16
11/28/97*

ESTINATION

USA

ARTICULARES CONSIGNADOS EN LA
CARA DESTINATARIA POR CUALQUIER
ERA CONSTATARSE EN LOS DATOS

AB0000079374

RAW MATERIAL RECEIVING RECORD

№ 10792

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0630

RECEIVED BY
DLW

SECTION 1

DATE	ORDER NO.	CAL OF TRUCK NO.	DECLARED WEIGHT
10/18/97	04-087455	SNIU 1210351	Net 1980 KG

SHIPPER	CARRIER
Bayer	Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit 6	3020	OCA

COMMENTS
C of A was faxed

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
M. W.	6:55

UNLOADED AT (tank number, unit, warehouse, etc.)
unit 6 T6119

COMMENTS
dropped unit for test

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
TLP	X		

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
97 Paul	X		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS



Telefax**Industrial Chemicals Division
Organic Chemicals**

Date:	<u>10/14/97</u>	Pages:	<u>5</u>
To:	<u>Bob Christina</u>	From:	<u>Andy Vannatta</u>
Company:	<u>Cedar Chemical</u>	Company:	<u>Organic Chemicals</u>
Fax:	<u>870-572-3795</u>	Fax:	<u>(412) 777-4109</u>
Phone:	<u>870-572-3701 X227</u>	Phone:	<u>(412) 777-2512</u>

Re: 3.4 DCA.

Attached are a copy of our Brokers
Instructions & the Analysis covering
two more containers of 3.4 DCA expected
to arrive in New Orleans on 10/23.

Our reference nos 06763629 & 63630

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AB0000006253



FRITZ COMPANIES, INC.
101 DELTA DRIVE/SUITE 5
ST. ROSE, LA 70087
FAX: 504-466-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-8741
Phone: 412 777-2000

OCTOBER 09, 1997

BAYER ORDER # : SEE ATTACHED
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO : SEE ATTACHED
VESSEL : SL QUALITY
BL # : STOLT SNN971899
CONTAINER # : SEE ATTACHED
NET WGT : SEE ATTACHED
PORT OF LOADING : ROTTERDAM
PORT OF ARRIVAL : NEW ORLEANS

ARRIVAL DATE : 10/23/97

10/02/97

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

SEE ATTACHED

MAKE I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 25-1339219BU)

TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :

H.S. # : SEE ATTACHED
RATE : SEE ATTACHED
CAS # : SEE ATTACHED

PLEASE ISSUE DELIVERY ORDER(S) TO :

CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :

CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :

NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS. CUSTOMER
REQUESTS TRIPLE E TRANSPORT AS CARRIER.

CC: CEDAR CHEMICAL CORP
XX, LOG AV, JB

—ATTACHMENTS—

JENNIFER HOLUB (JH)
412-777-2158



CUSTOMER : CEDAR CHEMICAL CORP
SNIU121338-7
10/23/97
CUSTOMER PO:

SL QUALITY
STOLT SNN971899
NET: 19640.00 KG

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-9741
Phone: 412 777-2000

BAYER PO# : 06Y63629 PRODUCT : N826 CONT CD : 99 NWGT : 19640.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

43,298 lbs

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

CUSTOMER : CEDAR CHEMICAL CORP
SNIU121340-6
10/23/97
CUSTOMER PO:

SL QUALITY
STOLT SNN971899
NET: 19040.00 KG

BAYER PO# : 06Y63630 PRODUCT : N826 CONT CD : 99 NWGT : 19040.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

41,975 lbs

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

(2)

P. 45

AB0000006253



BAYER AG
ZF ZENTRALE ANALYTIK
WERK LEVERKUSEN

CERTIFICATE OF ANALYSIS

061/062
PAGE 1 NRO
DATE 02.10.97

BAYER CORPORATION

ATTN: A. VANMATTIA
100 BAYER ROAD
PITTSBURGH PA 15205-9741
USA

SNIU 121340-6

ARTICLE: 3,4-DICHLOROANILINE LIQUID MOL 162,0
ART-NO.: 02 00734156

04-087455

SAMPLE-NO. | BATCH-NO. | WORK-ORDER-NO. | PURCHASE-ORDER-NO. | QUANTITY (KG)
410673-0 | 0802512F7 | 00802512F7 | (SEE MARKS) | 19040

DATE OF RELEASE: 01.10.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MOST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.8	%	99	
WATER (K. FISCHER)	0.05	%		0.1
3,4,3',4'-TETRACHLOROAZOBENZENE	1	MG/KG		50

MARKS:

BAYER
04-087455
NEW ORLEANS
06Y63630 NB26
3,4 DICHLOROANILINE, PURE
GROSS 22140 KG
NET 19040 KG
MADE IN GERMANY
NB26 01/11/96

CONTAINER-NO.:
SNTU121340-6

DR. SIEMERDT

GESAMT SEITEN 01

RAW MATERIAL RECEIVING RECORD

NO 11478

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0745

RECEIVED BY

M. Sullivan

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

11-4-97 *7/11* *SA 11121338-7* Net *7/11 43,298*

SHIPPER

Gilbert-Hudson/Ray Corp.

CARRIER

Hiscole E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	Unit #2	3020	DCA

COMMENTS

Lab Has C.O.A.

SECTION 2

RECEIVED AT (TANK NO., UNIT, WAREHOUSE, ETC.)

Unit #1 8:30

UNLOADED AT (tank number, unit, warehouse, etc.)

Unit #6

COMMENTS

2.000 gpt was dropped will be unloaded when that

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

TLP *X*

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

Daniel *X*

PLANT WEIGHT

UNLOADING TIMES

NET START TIME END TIME

COMMENTS

RAW MATERIAL RECEIVING RECORD

№ 11479

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

RECEIVED BY

0745

SECTION 1

M. Sullivan

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

11-4-97

n/a

SNIU 121340-6

Net n/a 41.976

SHIPPER

CARRIER

Lilienthal-Hindson - Bayer Corp.

Triple E

QUANTITY

CONTAINER

DESTINATION

RAW MAT CODE #

DESCRIPTION

1

S/C

Unit #2

3020

DCA

COMMENTS

Lab Has C.O.A.

SECTION 2

RECIPIENT

TIME SAMPLER/CERTIFICATE TAKEN TO LAB

M. Sullivan

7:56

UNLOADED AT (tank number, unit, warehouse, etc.)

car was dropped will be unloaded when cert is sat.

COMMENTS

SECTION 3

LAB TECHNICIAN

ACCEPT

REJECT

REASON FOR REJECTION

TLP

X

COMMENTS

SECTION 4

SHIFT SUPERVISOR

ACCEPT

REJECT

REASON FOR REJECTION

M. Sullivan

X

PLANT WEIGHT

UNLOADING TIMES

START TIME

END TIME

NET

COMMENTS

GILSCOT GUIDROZ INTERNATIONAL INC
2816 DIVISION ST., STE.202
METAIRIE, LA.70002
PHONE:504 887 8897
FAX:504 887 8898
INTERNATIONAL FREIGHT FORWARDERS

DATE:11-17-97

CEDAR CHEMICAL CO
WEST HELENA ARKANSAS
ATTN BOB CHRISTIAN

AS PER OUR CONVERSATION THIS MORNING
WE HAVE 4 X 20' ISOTANK FROM BAYER CORPORATION
READY TO BE DELIVERED TO CEDAR, WEST HELENA UPON YOUR
REQUEST.

THE ARE:
SNIU-1210789 ~~11/18~~
SNIU-1213279 ~~11/18~~
SNIU-1213368 ~~11/18~~
UTCU-2260070

AS PER OUR CONVERSATION WE WILL BE SENDING YOU
TWO TANKS TO CEDAR CHEMICAL W.HELENA UNIT 6
FOR TOMORROW 11-18-97
AND WE WILL WAIT FOR FURTHER INSTRUCTIONS ON THE OTHER TWO ISOTANKS

REGARDS
KEITH GUIDROZ
GILSCOT GUIDROZ INTL INC.

**Telefax****Industrial Chemicals Division
Organic Chemicals**

Date: 10/29/97 Pages: 8
To: Bob Christian From: Andy Vannatta
Company: Cedar Company: Organic Chemicals
Fax: 870-572-8795 Fax: (412) 777-4109
Phone: 870-572-3701 X227 Phone: (412) 777-2512

Re: 3.4.DCA -

cc: Keith Guidroz
Brokers instructions only.
504-887-8898

Attached is a copy of our brokers instructions
+ analysis covering four containers of
3.4 DCA expected to arrive in New Orleans
off the OOCL Inspiration on 11/2/97.

Please call if you have any questions.

Our Ref Nos 067 68631, 32, 38 484.

Andy

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PRITS COMPANIES, INC.
101 DELTA DRIVE/SUITE S
ST. ROSE, LA 70087
FAX: 504-466-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-6741
Phone: 412 777-2000

OCTOBER 22, 1997

BAYER ORDER # : SEE ATTACHED
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO : SEE ATTACHED
VESSEL : OOCL INSPIRATION
BL # : STOLT SNN971991
CONTAINER # : SEE ATTACHED
NET WGT : SEE ATTACHED
PORT OF LOADING : ROTTERDAM
PORT OF ARRIVAL : NEW ORLEANS

ARRIVAL DATE : 11/07/97

10/17/97

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

SEE ATTACHED

MAKE I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 25-1339219BU)

TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :

H.S. # : SEE ATTACHED
RATE : SEE ATTACHED
CAS # : SEE ATTACHED

PLEASE ISSUE DELIVERY ORDER(S) TO :

CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :

CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :

NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
CUSTOMER REQUESTED CARRIER IS TRIPLE E TRANSPORT. CONTACT KEITH GUIDROZ
FOR ARRANGEMENTS 504-887-8897.

CC: CEDAR CHEMICAL CORP
XX, LOG, AV

—ATTACHMENTS—

JENNIFER HOLUB (JH)
412-777-2158

CUSTOMER : CEDAR CHEMICAL CORP
SMTU121078-9
11/07/97
CUSTOMER PO:

OOCL INSPIRATION
STOLT SNN971991
NET: 19620.00 KG

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-8741
Phone: 412 777-2000

BAYER PO# : 06Y63633 PRODUCT : N826 CONT CD : 99 NWGT : 19620.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 ¢
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

CUSTOMER : CEDAR CHEMICAL CORP
SWIU121327-9
11/07/97
CUSTOMER PO:

OOCL INSPIRATION
STOLT SNN971991
NET: 20220.00 KG

BAYER PO# : 06Y63632 PRODUCT : N826 CONT CD : 99 NWGT : 20220.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 ¢
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

CUSTOMER : CEDAR CHEMICAL CORP
SWIU121336-6
11/07/97
CUSTOMER PO:

OOCL INSPIRATION
STOLT SNN971991
NET: 20100.00 KG

BAYER PO# : 06Y63631 PRODUCT : N826 CONT CD : 99 NWGT : 20100.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 ¢
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

(2)



CUSTOMER : CEDAR CHEMICAL CORP
UFCU226007-0
11/07/97
CUSTOMER PO:

OCL INSPIRATION
STOLF SNN971991
NET: 18800.00 KG

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-8741
Phone: 412 777-2000

BAYER PO# : 06Y63634 PRODUCT : N826 CONT CD : 99 HWGT : 18800.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 ¢
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

(3)

Bayer 

061/062
PAGE 1 END
DATE 13.10.97

BAYER CORPORATION

AB0000006253

Bayer 

061/062
PAGE 1 END
DATE 16.10.97

ATIN. A. VANNATTIA
100 BAYER ROAD
PITTSBURGH PA 15205-9741
USA

iv 401
DR. SIEWERT

Bayer 

061/062
PAGE 1 END
DATE 15.10.97

WERK LEVERKUSEN

BAYER CORPORATION

ATTN. A. VANNATTA
100 BAYER ROAD
PITTSBURGH PA 15205-9741
USA

ARTICLE: 2,4-DICHLOROANILINE LIQUID MOL 162.0
ART-NO.: 02 00734156

SAMPLE-NO.:	BATCH-NO.	WORK-ORDER-NO.:	PURCHASE-ORDER-NO.:	QUANTITY (KG)
410800-0	0802515L7	00802515L7	(SEE MARKS)	19620

DATE OF RELEASE: 14.10.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT
			MIN MAX

APPEARANCE		COMPLIES	MUST COMPLY
ASSAY (GAS CHROMATOGRAPHY)	99.5 %		
WATER (K.FISCHER)	0.02 %		
3,4,3',4'-TETRACHLOROAZOBENZENE	1 MG/KG		

MARKS:

BAYER
04-087455
NEW ORLEANS
06Y63633 N626
3,4 DICHLOROANTILINE, PURE
GROSS KG
NET 19620 KG
MADE IN GERMANY

CONTAINER-NO. :
BFIU121078-9

DR. EISENBROT



BAYER AG
ZF ZENTRALE ANALYTIK

CERTIFICATE OF ANALYSIS

061/062
PAGE 1 END
DATE 16.10.97

WERK LEVERKUSEN

BAYER CORPORATION

ATTN. A. VANDATTA
100 BAYER ROAD
PITTSBURGH PA 15205-9741
USA

ARTICLE: 3,4-DICHLOROANILINE LIQUID MOL 162.0
ART-NO.: 02 00734156

SAMPLE-NO. | BATCH-NO. | WORK-ORDER-NO. | PURCHASE-ORDER-NO. | QUANTITY (KG)
410814-0 | 080251617 | 0080251617 | (SEE MARKS) | 20000

DATE OF RELEASE: 15.10.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.5	%	99	
WATER (K.FISCHER)	<0.01	%	0.1	
3,4,3',4'-TETRACHLOROAZOBENZENE	6	NG/KG	50	

MARKS:

BAYER
04-087455
NEW ORLEANS
06Y61634 M926
3,4 DICHLOROANILINE, PURE
GROSS KG
NET 20000 KG
MADE IN GERMANY

CONTAINER-NO.:
UTC0226007-0

W. Ledy
DR. STEWART

RAW MATERIAL RECEIVING RECORD

NE 11575

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0430

RECEIVED BY

KC

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

11-18-97

04-087455

SNIU-121327-9

Net 20,220

SHIPPER

Bayer Chemical

CARRIER

Triple E

44,577

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S-C	unit 6	3020	D.C.A

COMMENTS

NO COA OK by M RIA

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

DAW

5/15

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

T-1

X

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

DAW

X

PLANT WEIGHT

UNLOADING TIMES

NET

START TIME

END TIME

COMMENTS

RAW MATERIAL RECEIVING RECORD

NO 11580

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

12:15

RECEIVED BY

M. A. D. in

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
11-18-97	04087455	SNIU 1210789	Net w/a 43164

SHIPPER

Bayer

CARRIER

Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit #6	3020	DCA

COMMENTS

Lab Has C.O.A.

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
<i>M. L. H. H. H. H.</i>	<i>12:30</i>

UNLOADED AT (tank number, unit, warehouse, etc.)

T-6211 (SPS HED)

COMMENTS

Spotted truck putting steam to melt!!

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>C. H.</i>	<i>✓</i>		

COMMENTS

C.O.A. 99.5

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
<i>L. ALL</i>	<i>✓</i>		

PLANT WEIGHT

UNLOADING TIMES

NET

START TIME

END TIME

COMMENTS

RAW MATERIAL RECEIVING RECORD

N: 10871

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0400

RECEIVED BY

B. McRimster

SECTION 1

DATE: 11-20-97 ORDER NO: 04-087455 CAR OR TRUCK NO: Sea-Cont # UTCU-2260070 DECLARED WEIGHT: 47800 LBS
Net 18800.00 KG

SHIPPER

Bayer

CARRIER

Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/c	unit #6	3080	DCA

COMMENTS

CoA is in Cedar Lab on this Material Per, V. Foster

SECTION 2

RECIPIENT: 22 Kungler TIME SAMPLE/CERTIFICATE TAKEN TO LAB: 5:00

UNLOADED AT (tank number, unit, warehouse, etc.)

T6211

COMMENTS

SPOTTED WITHIN

SECTION 3

LAB TECHNICIAN: YH ACCEPT: [check] REJECT: [] REASON FOR REJECTION:

COMMENTS

CoA Assay 99.5
H2O <0.01

SECTION 4

SHIFT SUPERVISOR: [signature] ACCEPT: [check] REJECT: [] REASON FOR REJECTION:

PLANT WEIGHT

UNLOADING TIMES

NET

START TIME

11:20:97 0500

END TIME

COMMENTS

RAW MATERIAL RECEIVING RECORD

10872

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0400

SECTION 1

RECEIVED BY

B. McSinitz

DATE	ORDER NO.	CAR ON TRUCK NO.	DECLARED WEIGHT
11-20-97	04-087455	Sea. Cont # SMU-1213366	2010000 KG Net 44376 LBS
SHIPPER		CARRIER	

Bayer

Triple

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/c	unit #6	3020	DCA

COMMENTS

Cof A in in Cedar Lab on this Material

Per. V. Foster

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
J. J. Knight	5:00

UNLOADED AT (tank number, unit, warehouse, etc.)

Tk 211

COMMENTS

Spotted e Unit

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
HA	✓		

COMMENTS

Cof A Assay 99.5
H2O .04

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
W. J. J. J.	✓		

PLANT WEIGHT

UNLOADING TIMES

NET	START TIME	END TIME
44456	11:20:97 0500	

COMMENTS



Telefax
**Industrial Chemicals Division
Organic Chemicals**
Date: 10/29/97Pages: 5To: Bob ChristianFrom: Andy VannattaCompany: CedarCompany: Organic ChemicalsFax: 870-572-8795Fax: (412) 777-4109Phone: 870-572-8701 X 227Phone: (412) 777-2512Re: 3.4 PCAcc: Keith Guidroz
Brokers instructions only
504-887-8898

Attached is a copy of our brokers instructions
& analysis covering two containers of
3.4 PCA expected to arrive in New Orleans
off the Houston Express on 11/15.

Our Ref Nos 00463635 + 36.

Please call if you have any questions.

Andy

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FRITE COMPANIES, INC.
101 DELTA DRIVE/SUITE 8
ST. ROSE, LA 70087
FAX: 504-456-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15208-0741
Phone: 412 777-2000

OCTOBER 23, 1997

BAYER ORDER # : SEE ATTACHED
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO :

VESSEL : HOUSTON EXPRESS

ARRIVAL DATE : 11/15/97

BL # : HOYER 1297390526

CONTAINER # : TIFULL7076-7

NET WT : 39460.00 KG

PORT OF LOADING : ANTWERPEN

10/20/97

PORT OF ARRIVAL : NEW ORLEANS

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

SEE ATTACHED

MAKE I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 25-1339219HU)

TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :

H.S. # : SEE ATTACHED

RATE : SEE ATTACHED

CAS # : SEE ATTACHED

PLEASE ISSUE DELIVERY ORDER(S) TO :

CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :

CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :

NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS. CUSTOMER
REQUESTED CARRIER IS TRIPLE E TRANSPORT. CONTACT KEITH GUIDROZ AT 504-887-8897
FOR DELIVERY APPOINTMENT.

CC: CEDAR CHEMICAL CORP
XX, LOG, AV, JB

—ATTACHMENTS—

JENNIFER HOLUB (JH)
412-777-2158



CUSTOMER : CEDAR CHEMICAL CORP
TIFU117076-7
11/15/97
CUSTOMER PO:

HOUSTON EXPRESS
BOYER 1297390526
NET: 39460.00 KG

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-8741
Phone: 412 777-2000

BAYER PO# : 06Y63635 PRODUCT : N826 CONT CD : 99 NWGT : 19700.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 ¢
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

BAYER PO# : 06Y63636 PRODUCT : N826 CONT CD : 99 NWGT : 19760.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 ¢
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

(2)

Bayer 

BAYER AG
ZF ZENTRALE ANALYTIK
WERK LEVERKUSEN

CERTIFICATE OF ANALYSIS

061/062
PAGE 1 END
DATE 16.10.97

BAYER CORPORATION

ATTN: A. VANDIATTA
100 BAYER ROAD
PITTSBURGH PA 15205-9741
USA

ARTICLE: 3,4-DICHLOROANILINE LIQUID MOL 162.0
ART-NO.: 02 00734156

SAMPLE-NO.	BATCH-NO.	WORK-ORDER-NO.	PURCHASE-ORDER-NO.	QUANTITY (KG)
410817-0	0802517G7	00802517G7	(SEE MARKS)	19700

DATE OF RELEASE: 15.10.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

[illegible]

MARKS:

BAYER
04-087455
NEW ORLEANS
06Y63635 N826
3,4 DICHLOROANILINE, PURE
GROSS KG
NET 19700 KG
MADE IN GERMANY

CONTAINER-NO.:
TIFU117079-3

DR. SIEBERT

Bayer 

061/062
PAGE 1 END
DATE 16.10.97

BAYER CORPORATION

DR. SIEWERDT

RAW MATERIAL RECEIVING RECORD

No 10820

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0930

RECEIVED BY

M. Sullivan

SECTION 1

DATE ORDER NO CAR OR TRUCK NO DECLARED WEIGHT

11-25-97

04087455

TIEU 117079-3

Net 44996

SHIPPER

Bayer Corp.

CARRIER

Harold E

43431

QUANTITY

CONTAINER

DESTINATION

RAW MAT CODE #

DESCRIPTION

1

S/C

unit #6

3020

DCA

COMMENTS

Lab Has C.O.A.

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

JH

☒

COMMENTS

99.2%

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

PLANT WEIGHT

UNLOADING TIMES

START TIME

END TIME

NET

COMMENTS

Dropped container at unit. 11/25/97

RAW MATERIAL RECEIVING RECORD

NO. 10821

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

12:15

RECEIVED BY

M. Sullivan

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

11-25-97

04087455

TIFU117076-7

Net 44,996

SHIPPER

Bayer Corp.

CARRIER

43,563

Bayer

QUANTITY

CONTAINER

DESTINATION

RAW MAT CODE #

DESCRIPTION

1

S/C

unit #6

3020

DCA

COMMENTS

Lab Has C.O.A.

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

JH

✓

COMMENTS

99.6%

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

V. Vener

✓

PLANT WEIGHT

UNLOADING TIMES

START TIME

END TIME

NET

13:15

COMMENTS

Dropped Containers at unit 11/25/97

FRITZ COMPANIES, INC.
101 DELTA DRIVE/SUITE 8
ST. ROSE, LA 70087
FAX: 504-466-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-9741
Phone: 412 777-2000

NOVEMBER 10, 1997

BAYER ORDER # : 06Y63637
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO :
VESSEL : SL INTEGRITY
BL # : STOLT SNN972044
CONTAINER # : SNIU121307-3
NET WGT : 18860.00 KG
PORT OF LOADING : ROTTERDAM
PORT OF ARRIVAL : NEW ORLEANS

ARRIVAL DATE : 11/17/97

10/23/97

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE (N826 99)

MAKE I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 25-1339219BU)

TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :
H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

PLEASE ISSUE DELIVERY ORDER(S) TO : CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :
CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :

NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS. CONTACT KEITH
GUIDROZ AT 504-887-8897 TO SET UP DELIVERY. CARRIER WILL BE TRIPLE E
TRANSPORT.

CC: CEDAR CHEMICAL CORP
XX, LOG, AV, JB

JENNIFER HOLUB (JH)
412-777-2158



FRITZ COMPANIES, INC.
101 DELTA DRIVE/SUITE 8
ST. ROSE, LA 70087
FAX: 504-466-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-8741
Phone: 412 777-8000

OCTOBER 30, 1997

BAYER ORDER # : 06Y63638
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO :
VESSEL : SL INTEGRITY
BL # : HOYER 1297401475
CONTAINER # : TIFU117029-0
NET WT : 20520.00 KG
PORT OF LOADING : ROTTERDAM
PORT OF ARRIVAL : NEW ORLEANS

ARRIVAL DATE : 11/24/97

10/22/97

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE (N826 99)

MAKE I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 25-1339219BU)

TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

PLEASE ISSUE DELIVERY ORDER(S) TO :

CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :

CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :

NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS. CARRIER TO BE
USED IS TRIPLE E TRANSPORT. CONTACT KEITH GUIDROZ AT 504-887-8897 TO SET UP
A DELIVERY APPOINTMENT.

CC: CEDAR CHEMICAL CORP
KX, LOG, AV, JB

JENNIFER HOLUB (JH)
412-777-2158



Telefax**Industrial Chemicals Division
Organic Chemicals**Date: 11/14/97Pages: 3To: Bob ChristianFrom: Andy VannattaCompany: CEDARCompany: Organic ChemicalsFax: 9-1-870-572-3795Fax: (412) 777-4109Phone: 9-1-870-572-3701 X 227Phone: (412) 777-2512cc: Keith Guidroz 504-887-8898
(Broker's Instructions Only)**Re: 3,4-DICHLOROANILINE**We are attaching brokers instructions and analysis covering Twocontainer(s) of 3,4-DCA, arriving on the SL Integrity ON 11/17
SMITH 121307-3 06Y63637Container number (s) TIFU 117029-0 Our reference number (s) 06Y63638**NOTICE OF CONFIDENTIALITY**

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RAW MATERIAL RECEIVING RECORD

N^o 10849

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0335

RECEIVED BY

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

12-2-97

C14-087455

TIFA-117029-0

Net 52955

SHIPPER

Bayer Chemical

CARRIER

Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	50A CONTAINER	Unit 6	3020	DCA

COMMENTS

C. O A in Unit 6

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

Ingles Miller

0420

UNLOADED AT (tank number, unit, warehouse, etc.)

Unit 6 T6210 & T6211

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

C L

✓

COMMENTS

C O A 99.8
H. C .02

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

L. ANN

✓

PLANT WEIGHT

UNLOADING TIMES

NET

START TIME

END TIME

COMMENTS

RAW MATERIAL RECEIVING RECORD

NO 10848

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE 0330	SECTION 1	RECEIVED BY KC
-------------------------	-----------	-------------------

DATE 12-2-97	ORDER NO. 04-087455	CAR OR TRUCK NO. SNIA 121307-3	DECLARED WEIGHT Net 41688
-----------------	------------------------	-----------------------------------	------------------------------

SHIPPER Bayer chemical	CARRIER Triple E
---------------------------	---------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	SEA CONTAINER	Unit 6	3020	DCA

COMMENTS
DCA in tank

SECTION 2	
RECIPIENT Dexter Malters	TIME SAMPLE/CERTIFICATE TAKEN TO LAB 0420

UNLOADED AT (tank number, unit, warehouse, etc.)
Unit 6 T6210 or T6211

COMMENTS

SECTION 3			
LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
C. M.	✓		

COMMENTS
CO 99.2
H₂O = 0.1

SECTION 4			
SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
L. Allen	✓		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS



49 Phillips Road 311 • Helena, AR 72342 • (870) 572-3701 • Fax (870) 572-3795

45098640

10/22/97

AB0000014701



P. O. Box 2749 • Hwy. 242 • West Helena, AR 72390 • (501) 572-3701 • Fax (501) 572-3785

**ACIFLUORFEN ACID
SODIUM SALT SOLUTION**

CERTIFICATE OF ANALYSIS

Lot No.: ACI10722-01

Shipment Date: 10/22/97

Container No. : SP 8244/4130 B.O.L. No.: 20137677

<u>Properties</u>	<u>Specification</u>	<u>Results</u>
Strength	38-42 % w/w as Acifluorfen acid	: 41.5
R118118	max. 0.7 %	: .43
Isomer Ratio	max. 0.105 (target 0.100)	: .098
Dinitro 1-3 impurities	max. 1.0 %	: .7
Trinitro impurities	max. 0.3 %	: .04
Acetate	max. 2.0 % (target 1.0 %)	: .43
Dichloroethane	max. 100 ppm	: 12.6
Fluoride Ion	Report (ppm)	: 122.4
Ph	6.8-10.5	: 7.4
Iron	Report (ppm)	: 24.7

<u>Other Properties</u>	<u>Other Requirements</u>	<u>Results</u>
:		
:		
:		
:		
:		

10/22/97
Date

Calvin Dwyer
Quality Assurance

SHIPPING ZONE: Cedar Chemical Corporation
Highway 242 South
West Helena, Arkansas 72300

DESTINATION ZONE: Zeneca Ag Products 82E
Cold Creek Plant
Bucks, Alabama 36512

PURCHASE ORDER: 45098462 FTZ #: 14B

DATE SHIPPED: October 22, 1997 DATE PREPARED: 10/22/97

IN TRANSIT NUMBER: _____ ZONE STATUS: NPF

We certify that the historical data related to the merchandise included in this shipment is available at FTZ 14B.

HTSUS NUMBER: 2934.90.15 HTSUS DESCRIPTION: Acifluorfen/R118118

HTSUS TOTAL VALUE: 101,347.44 HTSUS TOTAL QUANTITY: 8,362

ENTRY	HTSUS NUMBER	DESCRIPTION	UNIT VALUE	QUANTITY
ENGLAND	90200	R118118	12.12	6,584
ENGLAND	90200	R118118	12.12	1,778

EXTENDED VALUE
79,798.080
21,549.360
0.000

COUNTRY TOTAL
Value Sum

\$101,347.44

WEIGHED ON A FAIRBANKS SCALE

DATE 10/22/97

CUSTOMERS NAME ZENECA

ADDRESS BULK, AL

COMMODITY ACI Fluorfen

CARRIER MATLACIL

REMARKS

74700 06:16AM DC 22 97

30280 04:43AM DC 22 97

44420

FAIRBANKS SCALE CAT. 083905

LBS. GROSS

LBS. TARE - DRIVER ON _____ OFF _____

LBS. NET @ _____ PER LB. PRICE _____

SHIPPER Le to Allen

WEIGHER Carroll Riley

Form Approved
OMB No. 1515-0004

CFR 10.60, 10.61, 10, 123.41, 123.42

TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT

UNITED STATES CUSTOMS SERVICE

Entry No. 145,344,780

Class of Entry IT
(IT)(W&T)(W&EX)(T.E.)(Drawback, etc.)

Dist. No. 20 Port Code No. 06 First U.S. Port of Unloading Norfolk, Va

Entered or imported by Zeneca Ag Inc. Wilmington, Delaware to be shipped

on bond via M.G. Maher & Co., Inc. BOND #208506874 consigned to
(CHL Number) (Vessel or carrier) (Car number and initial) (Pier or station)District Director of Customs At Mobile, Al 19-01 Final foreign destination
Consignee Zeneca AG, Inc. C/O M.G. Maher & Co., Inc.
(At customs port of exit or destination) (For exportation only)Foreign port of lading N/A B/L No. N/A Date of sailing N/A
(Above information to be furnished only when merchandise is imported by vessel)Imported on the N/A Flag N/A on N/A via N/A
(Name of vessel or carrier and motive power) (Date imported) (Last foreign port)Exported from N/A on N/A Goods now at Sub-Zone 14B
(Country) (Date) (Name of warehouse, station, pier, etc.)

Mark and Number of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
45098640 Non-Privileged Foreign	48960 LBS Gross (8000 AK) Acicfluorfen Sodium Salt Solution Not Regulated by DOT Transfer Merchandise From FTZ #14B to FTZ #82B Non-Privileged Foreign	48960 LBS	\$103419.00 2934.90.15 11.48		\$11789.00

I.O. No. _____ CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND AND/OR LADING FOR EXPORTATION FOR Mobile, Al 19-01 WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN- DESCRIBED GOODS WERE: Delivered to the Carrier named above, for delivery to the District Director of Customs at destination sealed with Customs seals. Were the packages (were) (were not) labeled, or corded and sealed. (Inspector) (Date)		I truly declare that the statements contained herein are true and correct to the best of my knowledge and belief. Entered or withdrawn by M.G. Maher & Co., Inc. Atty-in-Fact To the Inspector or Warehouse Officer: The above-described goods shall be disposed of as specified herein. Received from the District Director of Customs of above district the merchandise described in this manifest for transportation and delivery into the custody of the customs officers at the port named above, all packages in apparent good order except as noted hereon. M.G. Maher & Co., Inc. Attorney or Agent of Carrier	
Laden on the— (Vessel, vehicle, or aircraft) which cleared for— on (Date) as verified by export records. (Inspector) (Date)		For the District Director of Customs. (Signature)	

Approved through 81/31/84, OMB No: 1515-0028.

CENSUS USE ONLY		DEPARTMENT OF THE TREASURY UNITED STATES CUSTOMS SERVICE		1. ZONE NO. AND LOCATION (Address) SUB ZONE 82B ZENECA, INC. BUCKS, AL	
				2. DISTRICT/PORT CODE 1901	
3. IMPORTING VESSEL, IS PLUG/OTHER CARRIER		4. EXPORT DATE	5. IMPORT DATE	6. ZONE ADMISSION NO. 19971023	
7. U.S. PORT OF UNLOADING		8. FOREIGN PORT OF LADING		9. BILL OF LADING/AWB NO.	10. INWARD MTFEST NO.
11. INBOND CARRIER		12. LT. NO AND DATE 145344780 10/22/97		13. IT. FROM (Port) MEMPHIS, TN.	
14. STATISTICAL INFORMATION FURNISHED DIRECTLY TO BUREAU OF CENSUS BY APPLICANT? <input type="checkbox"/> YES <input type="checkbox"/> NO					
15. NO. OF PACKAGES AND COUNTRY OF ORIGIN	16. DESCRIPTION OF MERCHANDISE	17. HTSUS NO.	18. QUANTITY (HTSUS)	19. GROSS WEIGHT	20. SEPARATE VALUE & AGGR (CENS)
15098640	8362AKACIPLUORFEN SODIUM SALT SOLUTION IRS# 51-011232002 TRANSFER OF MERCHANDISE FROM FTZ 14B to 82E	2934.90.15	44420	75300#	\$101347.
21. HARBOR MAINTENANCE FEE (19 CFR 24.24) <input type="checkbox"/>					
22. I hereby apply for admission of the above merchandise into the Foreign-Trade Zone. I declare to the best of my knowledge and belief that the above merchandise is not prohibited entry into the Foreign-Trade Zone within the meaning of section 3 of the Foreign-Trade Zones Act of 1934, as amended, and section 148.31, Customs Regulations.					
23. I hereby apply for the status designation indicated: <input type="checkbox"/> NONPRIVILEGED FOREIGN (19 CFR 148.42) <input type="checkbox"/> PRIVILEGED FOREIGN (19 CFR 148.41) <input type="checkbox"/> ZONE RESTRICTED (19 CFR 148.44) <input type="checkbox"/> DOMESTIC (19 CFR 148.43)					
24. APPLICANT'S NAME M. G. MAHER & CO., INC.		25. TITLE ATTY IN FACT		26. DATE 10/23/97	
F.T.Z. AGREES TO RECEIVE MERCHANDISE INTO THE ZONE		27. TITLE ATTY IN FACT		28. DATE 10/23/97	
PERMIT	Permission is hereby granted to transfer the above merchandise into the Zone.	29. TITLE Inspector		30. DATE 10/23/97	
PERMIT	The above merchandise has been granted the requested status.	31. TITLE Inspector		32. DATE 10/23/97	
33. The goods described herein are authorized to be transferred: <input type="checkbox"/> without exception <input type="checkbox"/> except as noted below					
PERMIT TO TRANSFER	34. CUSTOMS OFFICER AT SHIP/LIN (Signature) Carl E. Doh	35. TITLE Inspector	36. STATION Mobile, AL	37. DATE 10/23/97	
FTZ OPERATOR'S REPORT OF MERCHANDISE RECEIVED AT ZONE	38. RECEIVED FOR TRANSFER TO ZONE (Signature) M. G. MAHER & CO., INC.	39. TITLE ATTY IN FACT	40. CHL NO.	41. DATE 10/23/97	
42. To the District Director of Customs: The above merchandise was received at this Zone on the date shown except as noted below					
43. FOR THE OPERATOR (Signature) M. G. MAHER & CO., INC.		44. TITLE ATTY IN FACT		45. DATE 10/23/97	

(Paperwork Reduction Act Notice on Reverse)

Customs Form 274 (02/93)

10 CFR 101.10, 101.11, 101.12, 101.13, 101.14

TRANSPORTATION ENTRY AND MANIFEST OF
GOODS SUBJECT TO CUSTOMS INSPECTION
AND PERMIT

UNITED STATES CUSTOMS SERVICE

Entry No. **145,344,780**Class of Entry **TP**
(T.T. (WHT), (WHEX), (L.E.), (D.E.), (E.C.), (E.C.))Dist. No. **20** Port Code No. **06** First U.S. Port of Unloading **Norfolk, Va**Port of **Memphis, Tn** Date **10/22/97**Entered or imported by **Zeneca Ag Inc, Wilmington, Delaware** to be shippedin bond via **M.G. Maher & Co., Inc.** BOND # **208506874** consigned to
(CBL Number) (Vessel or carrier) (Car number and initial) (Pier or station)District Director of Customs At **Mobile, Al 19-01** Final foreign destinationConsignee **Zeneca Ag, Inc. C/O M.G. Maher & Co., Inc.** (For exportation only)
(At customs port of exit for destination)Foreign port of lading **N/A** B/L No. **N/A** Date of sailing **N/A**
(Above information to be furnished only when merchandise is imported by vessel)Imported on the **N/A** Flag **N/A** on **N/A** via **N/A**
(Name of vessel or carrier and motive power) (Date imported) (Last foreign port)Exported from **N/A** on **N/A** Goods now at **Sub-Zone 14B**
(Country) (Date) (Name of warehouse, stock pier, etc.)

Marks and Numbers of Packages	DESCRIPTION AND QUANTITY OF MERCHANDISE NUMBER AND KIND OF PACKAGES (Describe fully as per shipping papers)	GROSS WEIGHT IN POUNDS	VALUE (Dollars only)	RATE	DUTY
45098640 Non-Privileged Foreign	48960 LBS Gross (8000 AK) Acifluorfen Sodium Salt Solution Not Regulated by DOT Transfer Merchandise From FTZ #14B to FTZ #82E Non-Privileged Foreign	48960 LBS	\$103419.00 2934.90.15 11.48		\$11799.00

G.O. No.

CERTIFICATE OF LADING FOR TRANSPORTATION IN BOND
AND/OR LADING FOR EXPORTATION FOR**Mobile, Al 19-01**WITH THE EXCEPTIONS NOTED ABOVE, THE WITHIN-
DESCRIBED GOODS WERE:Delivered to the Carrier
named above, for delivery to
the District Director of
Customs at destination sealed
with Customs sealsNos. of the packages (were) (were
not) labeled, or banded and
sealed

Laden on the

(Vessel, vehicle, or aircraft)

which cleared for

on (Date)

as verified by export records

(Inspector)

(Date)

I truly declare that the statements contained herein are true and
correct to the best of my knowledge and belief.

Entered or withdrawn by

M.G. Maher & Co., Inc.**Atty-in-Fact**To the Inspector or Warehouse Officer: The above-described
goods shall be disposed of as specified herein.

For the District Director of Customs

Received from the District Director of Customs of above district the
merchandise described in this manifest for transportation and delivery
into the custody of the customs officer at the port named above.
all packages in apparent good order except as noted hereon.**M.G. Maher & Co., Inc.****Atty-in-Fact**

Customs Form 7512 (040884)

INSTRUCTIONS

Call customs officers or Part 18, Customs Regulations, for the appropriate number of copies required for entry, withdrawal, or manifest. For the purpose of transfer under the cartage or lighterage provisions of a proper bond to the place of shipment from the port of entry, extra copies bearing a stamp or notation as to their intended use may be required for local administration.

As this form is the same whether used as an entry or withdrawal or manifest, all copies may be prepared at the same time by custom process, unless more than one vessel or vehicle is used, in which case a separate set of manifest must be prepared for each such vessel or vehicle.

Whenever this form is used as an entry or withdrawal, care should be taken that the kind of entry is plainly shown in the blank in the upper right-hand corner of the face of the entry.

This form may be printed by private parties provided that the supply printed conforms to the official form in size, wording, arrangement, and quality and color of paper and ink. For sale by District Directors of Customs.

RECORD OF CARTAGE OR LIGHTERAGE

Delivered to Cartman or Lighterman in apparent good condition except as noted on this form

CONVEYANCE	QUANTITY	DATE	DELIVERED	RECEIVED	RECEIVED
MS MAHER & CO. INC	8000AK	10/22/97	8362AK (Inspector or Warehouse Officer)	8362AK (Cartman or Lighterman)	10/22/97 (Date) (Inspector)
			(Inspector or Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
			(Inspector or Warehouse Officer)	(Cartman or Lighterman)	(Date) (Inspector)
Total			(Warehouse proprietor)		

CERTIFICATES OF TRANSFER (If required)

I certify that within described goods were transferred by reason of _____
to _____
on _____ at _____
and sealed with _____ or seals
Nos. _____ and that
goods were in same apparent condition as noted on
original lading except _____

Inspector, Conductor, or Master

I certify that within described goods were transferred by reason of _____
to _____
on _____ at _____
and sealed with _____ or seals
Nos. _____ and that
goods were in same apparent condition as noted on
original lading except _____

Inspector, Conductor, or Master

INSPECTED

at _____
on _____ (Date)
and seals found _____
_____ (Inspector)

If transfer occurs within city limits of a customs port or station, customs officers must be notified to supervise transfer.

INSPECTOR'S REPORT OF DISCHARGE AT DESTINATION

Port _____ Station _____ (Date)

TO THE DISTRICT DIRECTOR OF CUSTOMS: Delivering Nos. _____ Car No. _____ Initial _____
Arrived _____ Condition of car _____, of seals _____, of packages _____

Date of Delivery to Importer or Gen. Order	PACKAGES	No. and Kind of Entry or General Order	Bonded Truck or Lighter No.	CONVEYANCE, ETC.

I certify above report is correct.

Inspector

Paperwork Reduction Act Notice: The Paperwork Reduction Act of 1980 says we must tell you why we are collecting this information, how we will use it, and whether you have a right to refuse to provide it. We ask for the information in order to carry out the laws and regulations administered by the U.S. Customs Service. These regulations and forms apply to entries in U.S. Customs territory. This is private information and is not to be released to the public without your written consent.

CEDAR - WEST HELENA

PURCHASE ORDER
RECEIVING DEPT. COPYP.O. NO. CHG.
04-087455 00

P.O. DATE: 9/09/97 PAGE 1

REQUISITIONER: CHRISTIAN

VENDOR: BAYER CORPORATION
P. O. BOX 75662
CHARLOTTE, NC

28275

DATE REC.:	INV. NO.:
VIA:	VENDOR REF.:
PRO NO.:	SHIPPER WGHT:
FRT. CHARGE:	PPD/COLL:
SHIPPER NO:	REC. BY:

SHIP FROM:	F.O.B.:	FREIGHT TERMS:	VENDOR NO.:
SHIP VIA:	DUTY PD-NOLA	BUYER	02987 - 04
	DATE REQUIRED:	PAYMENT TERMS:	TAX PERMIT:
	10/13/97	NET 30 DAYS	3553

QUANTITY ITEM ORDERED	QUANTITY RECEIVED	INVENTORY UNIT NUMBER	DESCRIPTION	ACCOUNT NUMBER	UNIT PRICE
REQ. NO. 14692 BY 20 1,200,000		CHRISTIAN LBS	3/4 DCA	C 153 5910	1.84 LBS

TO BE SHIPPED FROM GERMANY IN 150-TANKS 20 M/T EACH -
TOTAL OF 28 TANKS. ARRIVAL NEW ORLEANS AS FOLLOWS:2=W/O 10/13, 3=W/O 10/20, 3=W/O 10/27, 2=W/O 11/3, 2=W/O
11/10, 2=W/O 11/17, 3=W/O 11/24, 2=W/O 12/1, 2=W/O 12/8,

3=W/O 12/15, 2= W/O 12/22, 2=W/O 12/29

CEDAR MUST PAY FOR RETURN OF MT TANK TO NOLA DEPOT.

*** CONFIRMATION ***

AB0000014701

CEDAR CHEMICAL CORPORATION
Journal Voucher

[illegible]

WENT TO
PLANT

AB0000079530

Bayer - DCA

Load Oct

	Date	Inv #	Drms	Net	Lbs	US\$	Per # Price
DCA Purchase	10/28/97	3041727			41,976	77,235.84	1.840
DCA Purchase	10/28/97	3041713			42,285	77,804.40	1.840
Ocean Freight							0.000
Ocean Freight							0.000
Duty							0.000
Duty							0.000
Inland Freight							0.000
Total Cost delivered to Plant						155,040.24	3.694

Accounting:	\$ Dollars	Unit Cst
C153-5910	155,040.24	
C153-5920	0.00	
Total	84,281	155,040.24
		1.840



West Helena Acct. Dept.

REMIT TO:

BAYER CORPORATION

P.O. BOX 75662

CHARLOTTE, NC 28275-5662

RECEIVED
NOV 03 1997
RECEIVEDFIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE

BILL TO: 005761-001

NO: 3041727

DATE: 10-28-97 CO-21 DIV-10 DP-0012

SHIP TO: 005761-001

CEDAR CHEMICAL CORP

P.O. BOX 2749

W HELENA AR 72390

CEDAR CHEMICAL CORP

HWY 242 S

W HELENA AR 72390

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-087455

FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041727

DATE: 10-28-97

FREIGHT: COLLECT

DATE SHIPPED: 10-18-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	41,976.00	1.84	77,235.84

080081 06Y63628

BULK CONT: SNIU121035 GW: 45,000 TW: 3,024 NW: 41,976 (LBS)
ASSAY: 100.00SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

ENTERED

NOV 10 1997

WEST HELENA

VENDOR #		INVOICE #	
2987		3041727	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	102897
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
3			
INVOICE AMT.		DISC. ALLOWED	
77,235.84			
GL NUMBER	AMOUNT		WORK ORDER #
C 1535910	77,235.84		
DONE BY		DATE	APPROVED BY
			ENTERED BY

77,235.84

LAST PAGE
ATION

**0076

IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
TO SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Pittsburgh PA 15205 0000079530

West Helena Acct. Dept.

Bayer 

RENIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662RECEIVED
NOV 03 1997
RECEIVEDFIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205ORDER INVOICE
BILL TO: 005761-001

NO: 3041713

DATE: 10-28-97 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT.PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LAORDER INVOICE NO: 3041713 DATE: 10-28-97
FREIGHT: COLLECT DATE SHIPPED: 10-18-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	42,285.00	1.84	77,804.40

080081 06Y63627

BULK CONT: SNIU121063 GW: 50,000 TW: 7,715 NW: 42,285 (LBS)
ASSAY: 100.00SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

ENTERED

NOV 10 1997

WEST HELENA

VENDOR #		INVOICE #	
2987		3041713	
P.O. #	REC RPT. #	INV. CD	INV. DATE
87455		1	102897
TERM CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
3			
INVOICE AMT.		DISC. ALLOWED	
77,804.40			
QI NUMBER	AMOUNT		WORK ORDER #
C1835910	77,804.40		
			870
DONE BY	DATE	APPROVED BY	ENTERED BY
RK	11-10-97	QW	

77,804.40

LAST PAGE
ATION

**0075

IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
IF SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Bayer Corporation, Pittsburgh, PA 15205-0741

AB0000079530

AB0000006198

RAW MATERIAL RECEIVING RECORD

№ 11002

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE 0300	SECTION 1	RECEIVED BY KC
-------------------------	-----------	-------------------

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
12-30-97	NA	SNIA-121073-1	Net NA 42461

SHIPPER BAGER	CARRIER TRIPLE E
------------------	---------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	SEA CONTAINER	UNIT 6	NA NA	DCA

COMMENTS
C.C.A. in unit 6

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
TLP	X		

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
L. Allen	✓		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS
Dropped Sea container @ unit

**Telefax****Industrial Chemicals Division
Organic Chemicals**

Date: 12 / 12 / 97
To: Bob Christian
Company: CEDAR
Fax: 9-1-870-572-3795
Phone: 9-1-870-572-3701 X227
cc: Keith Guidroz 504-887-8898
(Broker's Instructions Only)

Pages: 5
From: Andy Vannatta
Company: Organic Chemicals
Fax: (412) 777-4109
Phone: (412) 777-2512

Re: 3,4-DICHLOROANILINE

We are attaching brokers instructions and analysis covering Two
container(s) of 3,4-DCA, arriving on the Galveston Bay ON 12/19
SN I41210583 06468645
Container number (s) SN I41210583-9 Our reference number (s) 06468645

NOTICE OF CONFIDENTIALITY

The information contained in and transmitted with this facsimile is confidential and/or exempt from disclosure under applicable law. It is intended only for the individual or entity named above. You are hereby notified that any dissemination, distribution, copying, or use of or reliance upon the information contained in and transmitted with this facsimile by or to anyone other than the recipient designated above by the sender is UNAUTHORIZED and STRICTLY PROHIBITED. If you have received this facsimile in error, please immediately call Bayer Corp. collect at (412) 777-2512 so that we can arrange for the return of the original facsimile at our cost. Thank you.

FRITZ COMPANIES, INC.
101 DELTA DRIVE/SUITE 9
ST. ROSE, LA 70087
FAX: 504-466-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15203-6741
Phone: 412 777-3000

DECEMBER 04, 1997

BAYER ORDER # : 06Y63645
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO :
VESSEL : GALVESTON BAY
BL # : STOLT SNN 972275
CONTAINER # : SNIU121058-3
NET WGT : 19520.00 KG
PORT OF LOADING : ROTTERDAM
PORT OF ARRIVAL : NEW ORLEANS

ARRIVAL DATE : 12/19/97

11/28/97

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE (N826 99)

MAKE I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 25-1339219BU)

TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 ¢
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

PLEASE ISSUE DELIVERY ORDER(S) TO :

CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :

CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :

NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS. CONTACT KEITH
GUIDROZ AT 504-887-8897 AND HE WILL SET UP DELIVERY WITH TRIPLE E TRANSPORT.

CC: CEDAR CHEMICAL CORP
XX, LOG, AV, JB

JENNIFER HOLUB (JH)
412-777-2158

FRITZ COMPANIES, INC.
101 DELTA DRIVE/SUITE 8
ST. ROSS, LA 70087
FAX: 504-466-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-8741
Phone: 412 777-2000

DECEMBER 04, 1997

BAYER ORDER # : 06Y63646
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO :
VESSEL : GALVESTON BAY
BL # : STOLT SNN972276
CONTAINER # : SHIU121059-9
NET WGT : 19080.00 KG
PORT OF LOADING : ROTTERDAM
PORT OF ARRIVAL : NEW ORLEANS

ARRIVAL DATE : 12/19/97

11/28/97

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE (N826 99)

MAKE I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 28-1339219BU)

TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :

E.S. # : 2921.42.2300

RATE : 1.70¢ / KG + 15.10 %

CAS # : NOT REQUIRED

POSITIVE TSCA CERTIFICATION REQUIRED

PLEASE ISSUE DELIVERY ORDER(S) TO :

CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :

CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :

NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS. CONTACT KEITH
GUIDROZ AT 504-887-8897 HE WILL SET UP DELIVERY WITH TRIPLE E TRANSPORT.

CC: CEDAR CHEMICAL CORP
XX, LOG, AV JB

JENNIFER HOLUB (JH)
412-777-2158



BAYER AG
27 CENTRALE ANALYTIK

CERTIFICATE OF ANALYSIS

061/062
PAGE 1 END
DATE 25.11.97

WERK LEVERKUSEN

BAYER CORPORATION

ATTN. A. VAMMATT
100 BAYER ROAD
PITTSBURGH PA 15205-9741
USA

ARTICLE: 3,4-DICHLOROANILINE LIQUID MOL 163.0
ART-NO.: 02 00734156

SAMPLE-NO. / BATCH-NO. / WORK-ORDER-NO. / PURCHASE-ORDER-NO. / QUANTITY (KG)
416562-0 / 0802927D7 / 00802527D7 / (SEE MARKS) / 19520

DATE OF RELEASE: 24.11.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.5	%	99	
WATER (K. FISCHER):	0.02	%		0.1
3,4,5',4'-TETRACHLOROAZOBENZENE	<1	MG/KG		50

MARKS:

BAYER
04-087455
NEW ORLEANS
06Y63645 M826
3,4 DICHLOROANILINE, PURE
GROSS 22680 KG
NET 19520 KG
MADE IN GERMANY

CONTAINER-NO.:
SHT0121058-3

DR. KUBEL

GESAMT SEITEN 01

BAYER AG
ZF ZENTRALE ANALYTIK

CERTIFICATE OF ANALYSIS

061/062
PAGE 1 END
DATE 04.12.97

WERK LEVERKUSEN

BAYER CORPORATION

ATTN. A. VASANTHA
100 BAYER ROAD
PITTSBURGH PA 15205-9741
USA

ARTICLE: 3,4-DICHLOROANILINE LIQUID MOL 162.0
ART-NO.: 02 00734156

SAMPLE-NO.: BATCH-NO.: WORK-ORDER-NO.: PURCHASE-ORDER-NO.: QUANTITY (KG)
416620-0 0802528E7 00802528E7 (SEE MARKS) 19080

DATE OF RELEASE: 04.12.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES			MUST COMPLY
ASSAY (GAS CHROMATOGRAPHY)	99.6	%	99	
WATER (K.FISCHER)	0.03	%		0.1
3,4,5'-TETRACHLOROAROBENZENE	1	MG/KG		50

MARKS:

BAYER
04-087455
NEW ORLEANS
06X63646 N826
3,4 DICHLOROANILINE, PURE
GROSS KG
NET 19080 KG
MADE IN GERMANY

CONTAINER-NO.:
SMIUL21059-9

V. G.
DR. GLEIMMOT

RAW MATERIAL RECEIVING RECORD

№ 11089

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0420

RECEIVED BY
DL

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
1/12/98	04-087455	SN11121059-9	Net NA 42064

SHIPPER	CARRIER
@ Rager	Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit 6	3020	DCA

COMMENTS
C of A was faxed

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
MM 100	5:00

UNLOADED AT (tank number, unit, warehouse, etc.)
dropped at unit 6 will be loaded when hot

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
EP	✓		

COMMENTS

SECTION 4

PLANT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
MM 100	✓		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS

RAW MATERIAL RECEIVING RECORD

Nº 11090

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0420

RECEIVED BY
DLV

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
1/12/98	04-087455	SN110121058-3	Net NA 43034

SHIPPER	CARRIER
Bayen	Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit 6	3020	DCA

COMMENTS
C of A was filed

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
M. A.	5:00

UNLOADED AT (tank number, unit, warehouse, etc.)
dumped at unit 6 will be reloaded when hot

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
EP	✓		

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
M. A.	✓		

PLANT WEIGHT NET	UNLOADING TIMES	
	START TIME	END TIME

COMMENTS



Telefax**Industrial Chemicals Division
Organic Chemicals****Date:** 12 / 23 / 97**Pages:** 2**To:** Bob Christian**From:** Andy Vannatta**Company:** CEDAR**Company:** Organic Chemicals**Fax:** 9-1-870-572-3795**Fax:** (412) 777-4109**Phone:** 9-1-870-572-3701 X227**Phone:** (412) 777-2512**cc:** Keith Guldroz 504-887-8898
(Broker's Instructions Only)**Re: 3,4-DICHLOROANILINE**We are attaching brokers instructions and analysis covering ONEcontainer(s) of 3,4-DCA, arriving on the N.L. Holland.Container number (s) UTC451009-5 Our reference number (s) 06x 63647**NOTICE OF CONFIDENTIALITY**

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FRITZ COMPANIES, INC.
101 DELTA DRIVE/SUITE 5
ST. ROSE, LA 70087
FAX: 504-466-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-0741
Phone: 412 777-2000

DECEMBER 10, 1997

BAYER ORDER # : 06Y63647
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO :
VESSEL : NL HOLLAND
BL # : STOLT SNN 972321
CONTAINER # : UTCU457009-6
NET WGT : 19500.00 KG
PORT OF LOADING : ROTTERDAM
PORT OF ARRIVAL : NEW ORLEANS

ARRIVAL DATE : 12/26/97

12/05/97

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE (N826 99)

MAKE I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 25-1339219BU)

TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TECA CERTIFICATION REQUIRED

PLEASE ISSUE DELIVERY ORDER(S) TO :

CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :

CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :

NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS
USE TRIPLE X TRANSPORT

CC: CEDAR CHEMICAL CORP
XX, LOG, JB, AV

JENNIFER HOLUB (JH)
412-777-2158



BAYER AG
KF ZENTRALE ANALYTIK

CERTIFICATE OF ANALYSIS

061/062
PAGE 1 END
DATE 16.12.97

WERK LEVERKUSEN

BAYER CORPORATION

APTH. A. VANMETER
100 BAYER ROAD
PITTSBURGH PA 15206-9741
USA

ARTICLE: 3,4-DICHLOROANILINE LIQUID MOL 162.0

ART-NO.: 02 00734156

SAMPLE-NO. / BATCH-NO.	WORK-ORDER-NO.	PURCHASE-ORDER-NO.	QUANTITY (KG)
416633-0 / D0574	00802529L7	(SEE MARKS)	20000

DATE OF RELEASE: 15.12.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.7	%	99	
WATER (K.FISCHER)	0.01	%		0.1
3,4,3',4'-TETRACHLOROANILINE	ND<1	MG/KG		50
ND = NOT DETECTABLE				

MARKS:

BAYER
04-087455
NEW ORLEANS
06Y63647 N826
3,4 DICHLOROANILINE, PURE
GROSS KG
NET 20000 KG
MADE IN GERMANY

CONTAINER-NO.:
UTCU457009-6

N. Lay
DR. SIEMENS

RAW MATERIAL RECEIVING RECORD

№ 11130

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE 1222		SECTION 1		RECEIVED BY H. Williams	
DATE 1-18-98	ORDER NO. 04-087455	CAR OR TRUCK NO. UTG 4457009-6	DECLARED WEIGHT Net N/A 42990		
SHIPPER Bayer			CARRIER Triple E		
QUANTITY 1	CONTAINER S/C	DESTINATION unit 6	RAW MAT CODE # 3020	DESCRIPTION DCA	
COMMENTS C. O. A. in LAB					
SECTION 2					
RECIPIENT Arthur L. Hughes		TIME SAMPLE/CERTIFICATE TAKEN TO LAB 12:40			
UNLOADED AT (tank number, unit, warehouse, etc.) T-26211					
COMMENTS					
SECTION 3					
LAB TECHNICIAN PF	ACCEPT V	REJECT	REASON FOR REJECTION		
COMMENTS COA 99.7%, H ₂ O 0.1					
SECTION 4					
SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION		
PLANT WEIGHT					
NET		UNLOADING TIMES START TIME		END TIME	
COMMENTS					



Telefax
**Industrial Chemicals Division
Organic Chemicals**
Date: 12/23/97Pages: 6To: Bob ChristianFrom: Andy VannattaCompany: CEDARCompany: Organic ChemicalsFax: 9-1-870-572-3795Fax: (412) 777-4109Phone: 9-1-870-572-3701 X227Phone: (412) 777-2512cc: Keith Guidroz 504-887-8898
(Broker's Instructions Only)**Re: 3,4-DICHLOROANILINE**

We are attaching brokers instructions and analysis covering three
 container(s) of 3,4-DCA, arriving on the Muskegon on 1/3/98
SAFH 121323-0 06/63698
SAFH 121279-7 06/68447
 Container number (s) SAFH 12110-5 Our reference number (s) 06/63698

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CUSTOMER : CEDAR CHEMICAL CORP
SNIU121110-5
01/03/98
CUSTOMER PO: 04-087455

NUEVO LEON
STOLT SNN972349
NET: 20160.00 KG

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-9741
Phone: 412 777-2000

BAYER PO# : 06Y63650 PRODUCT : N826 CONT CD : 99 NWGT : 20160.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

CUSTOMER : CEDAR CHEMICAL CORP
SNIU121279-7
01/03/98
CUSTOMER PO: 04-087455

NUEVO LEON
STOLT SNN972349
NET: 19540.00 KG

BAYER PO# : 06Y63649 PRODUCT : N826 CONT CD : 99 NWGT : 19540.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

CUSTOMER : CEDAR CHEMICAL CORP
SNIU121333-0
01/03/98
CUSTOMER PO: 04-087455

NUEVO LEON
STOLT SNN972349
NET: 20040.00 KG

BAYER PO# : 06Y63648 PRODUCT : N826 CONT CD : 99 NWGT : 20040.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 %
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

(2)

FRITZ COMPANIES, INC.
101 DELTA DRIVE/SUITE 9
ST. ROSE, LA 70087
FAX: 504-466-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-8741
Phone: 412 777-2000

DECEMBER 12, 1997

BAYER ORDER # : SEE ATTACHED
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO : SEE ATTACHED
VESSEL : NUEVO LEON
BL # : STOLT SNN972349
CONTAINER # : SEE ATTACHED
NET WGT : SEE ATTACHED
PORT OF LOADING : ROTTERDAM
PORT OF ARRIVAL : NEW ORLEANS

ARRIVAL DATE : 01/03/98

12/08/97

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

SEE ATTACHED

MAKE I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 25-1339219BU)

TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :

B.S. # : SEE ATTACHED
RATE : SEE ATTACHED
CAS # : SEE ATTACHED

PLEASE ISSUE DELIVERY ORDER(S) TO :

CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :

CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :

NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS
USE TRIPLE E TRANSPORT - PLEASE EXPEDITE

CC: CEDAR CHEMICAL CORP
XX, LOG, JB, AV

—ATTACHMENTS—

JENNIFER HOLUB (JH)
412-777-2158

12-23-97 04:53PM P010 #02
AB0000006198



BAYER AG
ZF ZENTRALE ANALYTIK

CERTIFICATE OF ANALYSIS

061/062
PAGE 1 END
DATE 05.12.97

WERK LEVERKUSEN

BAYER CORPORATION

ATTN. A. VAMNATHA
100 BAYER ROAD
PITTSBURGH PA 15205-9741
USA

ARTICLE: 3,4-DICHLOROANILINE LIQUID MOL 162.0
ART-NO.: 02 00734156

SAMPLE-NO. | BATCH-NO. | WORK-ORDER-NO. | PURCHASE-ORDER-NO. | QUANTITY (KG)
416680-0 | 0802531B7 | 00802531B7 | (SEE MARKS) | 20000.

DATE OF RELEASE: 05.12.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.7	%	99	
WATER (K.FISCHER)	<0.01	%		0.1
3,4,3',4'-TETRACHLOROAZOBENZENE	<1	MG/KG		50

MARKS:

BAYER
04-087455
NEW ORLEANS
06Y63649 N826
3,4 DICHLOROANILINE, PURE
GROSS KG
NET 20000 KG
MADE IN GERMANY

CONTAINER-NO.:
SNTUL21279-7

DR. SIEWERT

RAW MATERIAL RECEIVING RECORD

№ 11063

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

RECEIVED BY

0620

SECTION 1

DW

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

1/9/98 04-087455 SNIU121333-0 Net NA 44092

SHIPPER

CARRIER

Bayer

Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit 6	40100	DCA

COMMENTS

C of A was faked

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

J.D. Knight 07.50

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

Dropped at T6211 To unload at a later date

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

SV ✓

COMMENTS

DCA 99.7
H2O .02

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

Mr. Bu. Je ✓

PLANT WEIGHT

UNLOADING TIMES

NET

START TIME 1-9-98
0805

END TIME

COMMENTS

RAW MATERIAL RECEIVING RECORD

No 11062

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0620

RECEIVED BY

Dh

SECTION 1

DATE	ORDER NO	CAR OR TRUCK NO	DECLARED WEIGHT
1/9/98	04-087455	SNV121110-5	Net NA 44445

SHIPPER

Bayer

CARRIER

Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit 6	40100	DCA

COMMENTS

C of A was faxed

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
A.J. Knight	07:50

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

Unloaded at T 6211 TO Unload at a later date

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>WJ</i>	<input checked="" type="checkbox"/>		

COMMENTS

DCA 99.7
H2O .02

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
McBride	<input checked="" type="checkbox"/>		

PLANT WEIGHT

UNLOADING TIMES

NET

START TIME

0800

END TIME

COMMENTS

RAW MATERIAL RECEIVING RECORD

№ 11129

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

1200

RECEIVED BY

H. Williams

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLEARED WEIGHT

1-18-98 04-087465 SNIU121279-7 Net N/A 43078

SHIPPER

Bayer

CARRIER

Triplex

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	5/C	unit 6	3020	DCA

COMMENTS

C. O. A. in LAB

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

Arthur A. Hughes

12:15

UNLOADED AT (tank number, unit, warehouse, etc.)

T-6210

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

PF

✓

COMMENTS

COA 99.7 %; 01/1/00

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

PLANT WEIGHT

UNLOADING TIMES

NET

START TIME

END TIME

COMMENTS

**Telefax****Industrial Chemicals Division
Organic Chemicals**Date: 1/19/98Pages: 3To: Bob ChristianFrom: Andy VannattaCompany: CEDARCompany: Organic ChemicalsFax: 9-1-870-572-3795Fax: (412) 777-4109Phone: 9-1-870-572-3701 X227Phone: (412) 777-2512cc: Kelth Guidroz 504-887-8898
(Broker's Instructions Only)**Re: 3,4-DICHLOROANILINE**

We are attaching brokers instructions and analysis covering one
that arrived
container(s) of 3,4-DCA, arriving on the TMM Mexico on 1/9/98
Container number (s) SNIU121127-6 Our reference number (s) 06063651

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FRITZ COMPANIES, INC
100 Bayer Road
RP2
Pittsburgh, PA 15205-9741
412/788-8642

Organic Chemicals

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-9741
Phone: 412 777-2000

1/13/98

File No: 148
Broker No:
Bayer Ref: 06Y63651
Arrival Port: ~~NEW ORLEANS~~ *New Orleans* ETA: 1/9/98
Vessel: TMM MEXICO
B/L No: STOLT SNN972380
Container: *SAIU 121127-6*
Gross Wt: 22520 Kg. Net Wt: 19240 Kg.

Please make ID Entry in the name of Bayer Corporation, IRS NO: 25-1339219BU.. Transaction between RELATED parties.

(Fritz Fast Number: 5711488)

SEE ATTACHMENT.

Please issue delivery orders to:

CARRIER TO BE ADVISED

Ship on a COLLECT basis to:

CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390
PO: 04-087455
PHONE:
FAX:
Attention:

Special Instructions: BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS.
CONTACT KEITH GUIDROZ AT 504-887-8897 TO SET UP DELIVERY WITH TRIPLE E TRANSPORT.

NOTE ON DELIVERY ORDER: Delivery Order paperwork must reference Bayer P.O.# 06Y63651
/Customer P.O.# 04-087455. Carrier must call for delivery appointment at . Delivery Hours:
Emergency Contact: Chemtec 800-424-9300 International 703-527-3887

Carrier to bill:
Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-9741
Freight Payment Dept.

Thank you!

Jennifer Holub
412-777-2158

cc: XKLOGAVFC

LOG.XX



BAYER AG
 ZENTRALE ANALYTIK
 WERK LEVERKUSEN

CERTIFICATE OF ANALYSIS

061/062
 PAGE 1 END
 DATE 16.12.97

BAYER CORPORATION

ATTN. A. VANDERLA
 100 BAYER ROAD
 PITTSBURGH PA 15205-8741
 USA

ARTICLE: 3,4-DICHLOROANILINE LIQUID MOL 162.0
 ART-NO.: 02 00734156

SAMPLE-NO.	BATCH-NO.	WORK-ORDER-NO.	PURCHASE-ORDER-NO.	QUANTITY (KG)
416758-0	080253317	0080253317	(SEE MARKS)	19240

DATE OF RELEASE: 15.12.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.9	%	99	
WATER (K.FISCHER)	0.02	%		0.1
3,4,3',4'-TETRACHLOROBENZENE	RM-1	MG/KG		50
RM - NOT DETECTABLE				

MARKS:

BAYER
 04-087455
 NEW ORLEANS
 06Y63651 N826
 3,4 DICHLOROANILINE, PURE
 GROSS KG
 NET 19240 KG
 MADE IN GERMANY

CONTAINER-NO.:
 891012127-6

10.1.98
 DR. STEINERT

RAW MATERIAL RECEIVING RECORD

No 11169

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

1450

RECEIVED BY

B. McRae

SECTION 1

DATE ORDER NO. CAR OR TRUCKING DECLARED WEIGHT

1-24-98 D4-D87455 Sea Cont # SNU-1211976 Net 42416

SHIPPER

Bayer

CARRIER

Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/c	Unit #6	3020	DCA

COMMENTS

Cof A in in Cedar. Lab. per T. Peppers

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

A J Knight 1505

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

To Be unloaded LATER

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

TLP X

COMMENTS

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

D. Vard ✓

PLANT WEIGHT

UNLOADING TIMES

NET START TIME 1-24-98 15:20 END TIME

COMMENTS



Telefax
**Industrial Chemicals Division
Organic Chemicals**

Date: 1/19/98
 To: Bob Christian
 Company: CEDAR
 Fax: 9-1-870-572-3795
 Phone: 9-1-870-572-3701 X227
 cc: Kelth Guidroz 504-887-8898
 (Broker's Instructions Only)

Pages: 3
 From: Andy Vannatta
 Company: Organic Chemicals
 Fax: (412) 777-4109
 Phone: (412) 777-2512

Re: 3,4-DICHLOROANILINE

We are attaching brokers instructions and analysis covering ONE
 That Arrived
 container(s) of 3,4-DCA, ~~entering~~ on the TMM Mexico 1/9/98.
 Container number (s) UTCU 457000-7 Our reference number (s) 064101252

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FRITZ COMPANIES, INC
100 Bayer Road
RP2
Pittsburgh, PA 15205-9741
412/788-8642

Organic Chemicals

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-9741
Phone: 412 777-3000

1/19/98

File No: 150
Broker No:
Bayer Ref: 06Y63652 *New Orleans*
Arrival Port: NEW YORK ETA: 1/9/98
Vessel: TMM MEXICO
B/L No: STOLT SNN972380
Container: UTCU 457000-7
Gross Wt.: 24100 Kg. Net Wt.: 20300 Kg.

Please make ID Entry in the name of Bayer Corporation, IRS NO: 25-1339219BU. Transaction between
RELATED parties.

(Fritz Fast Number: 5711488)

SEE ATTACHMENT.

Please issue delivery orders to:

CARRIER TO BE ADVISED

Ship on a COLLECT basis to:

CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390
PO: 04-087455
PHONE:
FAX:
Attention:

Special Instructions: BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS.
CONTACT KEITH GUIDROZ AT 504-887-8897 TO SET UP DELIVERY WITH TRIPLE E TRANSPORT.

NOTE ON DELIVERY ORDER: Delivery Order paperwork must reference Bayer P.O.# 06Y63652
/Customer P.O.# 04-087455. Carrier must call for delivery appointment at . Delivery Hours:
Emergency Contact: Chemtree 800-424-9300 International 703-527-3887

Carrier to bill:
Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-9741
Freight Payment Dept.

Thank you!

Jennifer Holub
412-777-2158

cc: XX,LOGAV,PC

LOG,XX



BAYER AG
 57 SENTRALE ANALYTIK

CERTIFICATE OF ANALYSIS

061/063
 PAGE 1 END
 DATE 16.12.97

WERK LEVERKUSEN

BAYER CORPORATION

ASTW. A. VANDER
 100 BAYER ROAD
 PITTSBURGH PA 15206-9741
 USA

ARTICLE: 3,4-DICHLOROANILINE LIQUID MOL 162.0
 ART-NO.: 02 00734186

SAMPLE-NO.: BATCH-NO.: WORK-ORDER-NO.: PURCHASE-ORDER-NO.: QUANTITY (KG)
 416750-0 : 060253407 : 060253407 : (SEE MARKS) : 20300

DATE OF RELEASE: 15.12.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.9	%	99	
WATER (K.FISCHER)	0.01	%		0.1
3,4,3',4'-TETRACHLOROANILINE	<1	MG/KG		50

MARKS:

BAYER
 04-087483
 NEW ORLEANS,
 05Y63552 NB26
 3,4 DICHLOROANILINE, PURE
 GROSS 20
 NET 20300 KG
 MADE IN GERMANY

Container No:
 Utcu457000-7

il. Lidy
 DR. STEWART

RAW MATERIAL RECEIVING RECORD

№ 11165

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

RECEIVED BY

0720

SECTION 1

DL

DATE	ORDER NO	CAR OR TRUCK NO	DECLARED WEIGHT
1/24/98	04-0P7455	UTCU4570007-	Net 44753

SHIPPER

CARRIER

Bayer

Tribe E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit 6	3020	DCA

COMMENTS

C of A was faked

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
Mart	9:00

UNLOADED AT (tank number, unit, warehouse, etc.)

unit 6 will be unloaded into T6210 or T6211
each one will be 1/2 up

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
FD	✓		

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
Shiel	✓		

PLANT WEIGHT

UNLOADING TIMES

NET

START TIME

END TIME

COMMENTS

can't was dropped in unit



Telefax**Industrial Chemicals Division
Organic Chemicals**Date: 1 / 13 / 98Pages: 5To: Bob ChristianFrom: Andy VannottaCompany: CEDARCompany: Organic ChemicalsFax: 9-1-870-572-3795Fax: (412) 777-4109Phone: 9-1-870-572-3701 X227Phone: (412) 777-2512cc: Kelth Guidroz 504-887-8898
(Broker's Instructions Only)

Re: 3,4-DICHLOROANILINEWe are attaching brokers instructions and analysis covering TWOcontainer(s) of 3,4-DCA, arriving on the Muenberg Express on 1/17/98
SLI4121015-6 06463653Container number (s) SLI4121092-1 Our reference number (s) 06463654**NOTICE OF CONFIDENTIALITY**

The information contained in and transmitted with this facsimile is confidential and/or exempt from disclosure under applicable law. It is intended only for the individual or entity named above. You are hereby notified that any dissemination, distribution, copying, or use of or reliance upon the information contained in and transmitted with this facsimile by or to anyone other than the recipient designated above by the sender is ~~UNAUTHORIZED~~ and ~~STRICTLY PROHIBITED~~. If you have received this facsimile in error, please immediately call Bayer Corp. collect at (412) 777-2512 so that we can arrange for the return of the original facsimile at our cost. Thank you.

PRITE COMPANIES, INC.
101 DELTA DRIVE/SUITE S
ST. ROSE, LA 70087
FAX: 504-466-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-8741
Phone: 412 777-2000

JANUARY 02, 1998

BAYER ORDER # : SEE ATTACHED
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO : SEE ATTACHED
VESSEL : N/RNBERG EXPRESS
BL # : STOLT 8NN972438
CONTAINER # : SEE ATTACHED
NET WGT : SEE ATTACHED
PORT OF LOADING : ROTTERDAM
PORT OF ARRIVAL : NEW ORLEANS

ARRIVAL DATE : 01/17/98

12/23/97

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

SEE ATTACHED

MAKE I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 25-1339219BU)

TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :

H.S. # : SEE ATTACHED
RATE : SEE ATTACHED
CAS # : SEE ATTACHED

PLEASE ISSUE DELIVERY ORDER(S) TO :

CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :

CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :

NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS. CONTACT KEITH
GUIDROZ AT 504-887-8897 TO SET UP DELIVERY USING TRIPLE E TRANSPORT AS THE
CARRIER.

CC: CEDAR CHEMICAL CORP
XX, LOC, AV, JB

—ATTACHMENTS—

JENNIFER HOLUB (JH)
412-777-2158

CUSTOMER : CEDAR CHEMICAL CORP
SMI0121015-6
01/17/98
CUSTOMER PO:

HJERNBERG EXPRESS
STOLT SNN972438
NET: 18800.00 KG

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15203-0741
Phone: 412 777-2000

BAYER PO# : 06Y63653 PRODUCT : N826 CONT CD : 99 NWGT : 18800.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

H.S. # : 2921.42.2300
RATE : 1.40¢ / KG + 13.90 ¢
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

CUSTOMER : CEDAR CHEMICAL CORP
SMI0121092-1
01/17/98
CUSTOMER PO:

HJERNBERG EXPRESS
STOLT SNN972438
NET: 19000.00 KG

BAYER PO# : 06Y63654 PRODUCT : N826 CONT CD : 99 NWGT : 19000.00 KG

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE

H.S. # : 2921.42.2300
RATE : 1.40¢ / KG + 13.90 ¢
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

(2)



BAYER AG
ZF ZENTRALE ANALYTIK

CERTIFICATE OF ANALYSIS

061/062
PAGE 1 END
DATE 23.12.97

WERK LEVERKUSEN

BAYER CORPORATION

ATTN. A. VANHATTA
100 BAYER ROAD
PITTSBURGH PA 15205-9741
USA

ARTICLE: 3,4-DICHLOROCANILINE LIQUID MOL 162.0
ART-NO.: 02 00734156

SAMPLE-NO.	BATCH-NO.	WORK-ORDER-NO.	POURCHASE-ORDER-NO.	QUANTITY (KG)
416814-0	0802535B7	00802535B7	(SEE MARKS)	18800

DATE OF RELEASE: 23.12.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.7	%	99	
WATER (K. FISCHER)	0.06	%		0.1
3,4,3',4'-TETRACHLOROAZOBENZENE	<1	MG/KG		50
NY - NOT DETECTABLE				

MARKS:

BAYER
04-087455
NEW ORLEANS
06Y63653 N826
3,4 DICHLOROCANILINE, PURE
GROSS 21960 KG
NET 18800 KG
MADE IN GERMANY

CONTAINER-NO.:
8N1U121015-6

W. L.
MR. SIMMERET

Bayer BAYER AG
KF ZENTRALE ANALYTIK

CERTIFICATE OF ANALYSIS

061/062
PAGE 1 END
DATE 23.12.97

WERN LEVERKUSEN

BAYER CORPORATION

ATTN. A. VANHATTA
100 BAYER ROAD
PITTSBURGH PA 15205-9741
USA

ARTICLE: 3,4-DICHLOROANILINE LIQUID MOL 162.0

ART-NO.: 02 00734186

SAMPLE-NO.:	BATCH-NO.	WORK-ORDER-NO.:	PURCHASE-ORDER-NO.:	QUANTITY (KG)
416819-0	0802536C7	00802536C7	(SEE MARKS)	19000

DATE OF RELEASE: 23.12.97

SAMPLE WAS TAKEN ACC. TO COMPANY STAND. AND TESTED WITH THE FOLLOWING RESULT:

TEST	RESULT	UNIT	REQUIREMENT	
			MIN	MAX
APPEARANCE	COMPLIES		MUST COMPLY	
ASSAY (GAS CHROMATOGRAPHY)	99.6	%	99	
WATER (K.FISCHER)	0.04	%		0.1
3,4,3',4'-TETRACHLOROAZOBENZENE	<1	MG/KG		50
ND = NOT DETECTABLE				

MARKS:

BAYER
 04-087455
 NEW ORLEANS
 05Y63654 NB26
 3,4 DICHLOROANILINE, PURE
 GROSS 22160 KG
 NET 19000 KG
 MADE IN GERMANY

CONTAINER-NO.:
SNU0121092-1

DR. STEINBOT

RAW MATERIAL RECEIVING RECORD

№ 11188

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0348

RECEIVED BY

[Signature]

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
1-28-98	04-087455	SN: 121092-1	Net 150041.887

SHIPPER

Bunker

CARRIER

Truck 2

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	SIC	unit 6	3020	DCA

COMMENTS

C.O.A. in TAR

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>JH</i>	<input checked="" type="checkbox"/>		

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
<i>[Signature]</i>	<input checked="" type="checkbox"/>		

PLANT WEIGHT

UNLOADING TIMES

NET	START TIME	END TIME

COMMENTS

RAW MATERIAL RECEIVING RECORD

No. 11191

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0800

RECEIVED BY

M. Sullivan

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
1-29-98	04087455	SN10121015-6	Net <i>n/a</i>

SHIPPER

Bayer

CARRIER

Sample E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	SK	unit #6	3020	DCA

COMMENTS

Lab Has C.O.A.

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
<i>M. Sullivan</i>	8:55

UNLOADED AT (tank number, unit warehouse, etc.)

unit 6

COMMENTS

cont. will be dropped & unloaded at the next day

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
<i>TLP</i>	<i>X</i>		

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
<i>E. Sullivan</i>	<i>X</i>		

PLANT WEIGHT

UNLOADING TIMES

NET

START TIME

END TIME

COMMENTS

CEDAR CHEMICAL CORPORATION
Journal Voucher

[illegible]

WENT TO PLANTS

AB0000079519

Journal Voucher

AB0000079519

Bayer - DCA

Load Nov

	Date	Inv #	Drms	Net	Lbs	US\$	Per # Price
DCA Purchase	10/30/97	3041732			43,299	79,670.16	1.840
DCA Purchase	10/30/97	3041736			41,976	77,235.84	1.840
DCA Purchase	11/20/97	3041742			43,255	79,589.20	1.840
DCA Purchase	11/20/97	3041740			44,577	82,021.68	1.840
DCA Purchase	11/21/97	3041743			41,447	76,262.48	1.840
DCA Purchase	11/21/97	3041737			44,313	81,535.92	1.840
DCA Purchase	11/25/97	3041745			43,431	79,913.04	1.840
DCA Purchase	11/25/97	3041747			43,563	80,155.92	1.840
Ocean Freight							#REF!
Ocean Freight							#REF!
Duty							#REF!
Duty							#REF!
Inland Freight							#REF!
Total Cost delivered to Plant						636,384.24	#REF!

Accounting:	\$ Dollars	Unit Cst
C153-5910	636,384.24	
C153-5920	0.00	
Total	#REF! 636,384.24	#REF!

REMIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3041732

DATE: 10-30-97 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

West Helena Act. Dept.

RECEIVE
NOV 04 1997
RECEIVE

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

DEC 10 1997

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT.

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041732 **DATE: 10-30-97**
FREIGHT: COLLECT **DATE SHIPPED: 10-30-97**

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	43,299.00	1.84	79,670.16

080081 06Y63629

BULK CONT: SNIU121338 GW: 50,000 TW: 6,701 NW: 43,299 (LBS)
ASSAY: 100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041732	
PO #	REC. RPT. #	INV. CD	INV. DATE
87455		1	103097
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
3			
INVOICE AMT.		DISC ALLOWED	
79,670.16			
GL NUMBER	AMOUNT	WORK ORDER #	
C1535910	79,670.16		
DATE		APPROVED BY	
12-9-97		ENTERED BY	
DONE BY			
RK			

79,670.16

LAST PAGE
TION

**0109

IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
IF SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Corporation, Pittsburgh, PA 15205-9741

AB000007951

West Helena Acct. Dept.



REMIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

RECEIVED
NOV 04 1997
RECEIVED

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE

NO: 3041736

DATE: 10-30-97 CO-21 DIV-10 DP-0012

BILL TO: 005761-001

SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

ENTERED
DEC 10 1997

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041736 DATE: 10-30-97
FREIGHT: COLLECT DATE SHIPPED: 10-30-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	41,976.00	1.84	77,235.84

080081 06Y63630

BULK CONT: SNIU121340 GW: 50,000 TW: 8,024 NW: 41,976 (LBS)
ASSAY: 100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041736	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	103097
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
5			
INVOICE AMT		DISC ALLOWED	
77,235.84			
GL NUMBER	AMOUNT	WORK ORDER #	
01535910	77,235.84		
DONE BY		DATE	APPROVED BY
RK		12-9-97	OTW
		ENTERED BY	

77,235.84

LAST PAGE
TION

**0110

IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

orporation, Pittsburgh, PA 15205-9741

AB0000079519





REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO:3041740

DATE: 11-20-97 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

West Helena Acct. Dept.

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

RECEIVE
DEC 01 1997
RECEIVE

11575

NOV 30 1997

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #:04-087455
FOB:NEW ORLEANS, LA

ORDER INVOICE NO: 3041740 DATE: 11-20-97
FREIGHT: COLLECT DATE SHIPPED: 11-18-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	44,577.00	1.84	82,021.68

080081 06Y63632

BULK CONT:SNIU121327 GW: 50,000 TW: 5,423 NW: 44,577 (LBS)
ASSAY%100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041740	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	112097
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
2			
INVOICE AMT		DISC ALLOWED	
82,021.68			
GL NUMBER	AMOUNT	WORK ORDER #	
01535910	82,021.68		
DONE BY		DATE	APPROVED BY
RK		11-30-97	
		ENTERED BY	

E 82,021.68

LAST PAGE
RATION

**0076

IED IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS YOUR ORDER IS ACCEPTED
E TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Corporation, Pittsburgh, PA 15205-9741

AB0000079519



West Helena Acct. Dent

REMIT TO:

BAYER CORPORATION

P.O. BOX 75662

CHARLOTTE, NC 28275-5662

RECEIVED
DEC 02 1997
RECEIVEDFIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE

BILL TO: 005761-001

NO: 3041743

DATE: 11-25-97 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 7239010801
ENTERED
DEC 10 1997

INVOICE

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LAORDER INVOICE NO: 3041743 DATE: 11-25-97
FREIGHT: COLLECT DATE SHIPPED: 11-21-97PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	41,447.00	1.84	76,262.48

080081 06Y63634
BULK CONT: UTCU226007 GW: 45,000 TW: 3,553 NW: 41,447 (LBS)
ASSAY: 100.00SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

1

CE 76,262.48

1 LAST PAGE
ORATION

**0121

BY SIGNING YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
IF NO SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
ON THE TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDECorporation, Pittsburgh, PA 15205-9741
AB000007951

VENDOR #		INVOICE #	
2987		3041743	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	112597
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
3			
INVOICE AMT.		DISC. ALLOWED	
76,262.48			
GL NUMBER	AMOUNT	WORK ORDER #	
01335910	76,262.48		
DONE BY		ENTERED BY	
RK		12-9-97	
DATE		APPROVED BY	
12-9-97			



REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

RECEIVED
DEC 02 1997
NO: 3041737

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

DATE: 11-25-97 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

ENTERED

DEC 10 1997

INVOICE

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041737 DATE: 11-25-97
FREIGHT: COLLECT DATE SHIPPED: 11-21-97

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	44,313.00	1.84	81,535.92

080081 06Y63631
BULK CONT: SNIU121336 GW: 50,000 TW: 5,687 NW: 44,313 (LBS)
ASSAY: 100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041737	
P.O. #	REC. RPT. #	INV CO	INV DATE
87455		1	112597
TERMS CODE	DUE DATE	FRT. BILL CO	SALES ORDER #
2			
INVOICE AMT.		DISC. ALLOWED	
81,535.92			
GL NUMBER	AMOUNT	WORK ORDER #	
01535910	81,535.92		
DONE BY		DATE	
RK		12-9-97	
APPROVED BY		ENTERED BY	

81,535.92

1 LAST PAGE
ORATION

**0120

IED IN YOUR PURCHASE ORDER. YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Corporation, Pittsburgh, PA 15205-9741
AB00000795



West Helena Acct. Dept.

REMIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662RECEIVED
DEC 02 1997
RECEIVEDFIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205ORDER INVOICE
BILL TO: 005761-001

NO: 3041745

DATE: 11-25-97 CD-21 DIV-10 DP-0012

SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

10820

ENTERED

DEC 10 1997

WEST HELENA

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNTPURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LAORDER INVOICE NO: 3041745 DATE: 11-25-97
FREIGHT: COLLECT DATE SHIPPED: 11-25-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	43,431.00	1.84	79,913.04

080081 06Y63635

BULK CONT: TIFU117076 GW: 50,000 TW: 6,569 NW: 43,431 (LBS)
ASSAY: 100.00SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041745	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	112597
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
3			
INVOICE AMT.	DISC. ALLOWED		
79,913.04			
GL NUMBER	AMOUNT		WORK ORDER #
01535910	79,913.04		
DATE		APPROVED BY	
12-9-97		[Signature]	
DONE BY		ENTERED BY	
[Signature]			

79,913.04

LAST PAGE
RATION

**0122

ED IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Corporation, Pittsburgh, PA 15205-9741

AB0000079519



West Helena Arcl Dept

REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

RECEIVED
DEC 02 1997
RECEIVED

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3041747

DATE: 11-25-97 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

10821
ENTERED
DEC 10 1997

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-087455
POB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041747 DATE: 11-25-97
FREIGHT: COLLECT DATE SHIPPED: 11-25-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	43,563.00	1.84	80,155.92

080081 06Y63636

TANK TRUCK: 000
ASSAY: 100.00

GW: 50,000 TW: 6,437 NW: 43,563 (LBS)

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041747	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	112597
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
3			
INVOICE AMT.	DISC. ALLOWED		
80,155.92			
GL NUMBER	AMOUNT		WORK ORDER #
01535910	80,155.92		
886			
DONE BY	DATE	APPROVED BY	ENTERED BY
RK	12-9-97		

80,155.92

LAST PAGE
ORATION

**0123

IF IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
IF NO SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
IF TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Corporation, Pittsburgh, PA 15205-8741

AB0000079519



Telefax**Industrial Chemicals Division
Organic Chemicals****Date:** 12 / 9 / 97**Pages:** 3**To:** Bob Christian**From:** Andy Vannatta**Company:** CEDAR**Company:** Organic Chemicals**Fax:** 9-1-870-572-3795**Fax:** (412) 777-4109**Phone:** 9-1-870-572-3701 X 227**Phone:** (412) 777-2512**cc:** Keith Guidroz 504-887-8898
(Broker's Instructions Only)

Re: 3,4-DICHLOROANILINEWe are attaching brokers instructions and analysis covering ONEcontainer(s) of 3,4-DCA, arriving on the DOCL INNOVATION - ON 12/11Container number (s) SMI412103 Our reference number (s) 06460044**NOTICE OF CONFIDENTIALITY**

The information contained in and transmitted with this facsimile is confidential and/or exempt from disclosure under applicable law. It is intended only for the individual or entity named above. You are hereby notified that any dissemination, distribution, copying, or use of or reliance upon the information contained in and transmitted with this facsimile by or to anyone other than the recipient designated above by the sender is UNAUTHORIZED and STRICTLY PROHIBITED. If you have received this facsimile in error, please immediately call Bayer Corp. collect at (412) 777-2512 so that we can arrange for the return of the original facsimile at our cost. Thank you.

FRITE COMPANIES, INC.
101 DELTA DRIVE/SUITE 8
ST. ROSE, LA 70087
FAX: 504-466-4322

Bayer Corporation
100 Bayer Road
Pittsburgh, PA 15205-6791
Phone: 412 777-8000

NOVEMBER 26, 1997

BAYER ORDER # : 06Y63644
CUSTOMER : CEDAR CHEMICAL CORP
CUSTOMER PO :
VESSEL : OOCL INNOVATION
BL # : SKOLT SHN972231
CONTAINER # : SHIU121073-1
NET WGT : 19260.00 KG
PORT OF LOADING : ROTTERDAM
PORT OF ARRIVAL : NEW ORLEANS

ARRIVAL DATE : 12/11/97

11/20/97

ENCLOSED, PLEASE FIND DOCUMENTS PERTAINING TO THE FOLLOWING.

1 TANK CONTAINER(S) OF 3,4 DICHLOROANILINE, PURE (NB26 99)

MAKE I.D. ENTRY IN THE NAME OF BAYER CORPORATION (IMPORTER'S # 25-1339219BU)

TRANSACTION BETWEEN RELATED PARTIES

ENTER WITH U. S. CUSTOMS AS :

H.S. # : 2921.42.2300
RATE : 1.70¢ / KG + 15.10 ¢
CAS # : NOT REQUIRED
POSITIVE TSCA CERTIFICATION REQUIRED

PLEASE ISSUE DELIVERY ORDER(S) TO :

CARRIER TO BE ADVISED

SHIP ON A COLLECT BASIS TO :

CEDAR CHEMICAL CORP
HIGHWAY 242
WEST HELENA, AR 72390

INLAND BILL OF LADING ATTACHED

SPECIAL INSTRUCTIONS :

NOTE ON DELIVERY ORDER: CARRIER TO CALL FOR DELIVERY APPOINTMENT
BROKER TO SUPPLY CARRIER WITH ATTACHED MSDS AND BULK TAGS. CONTACT KEITH
GUIDROZ AT 504-887-8897 TO SET UP DELIVERY WITH TRIPLE E TRANSPORT.

CC: CEDAR CHEMICAL CORP
XX, LOG (AV), JB

JENNIFER HOLUB (JB)
412-777-2158

WEST HELENA
1998 BUDGET

**CEDAR CHEMICAL CORPORATION
ORGANICS DIVISION
1998 BUDGET ASSUMPTIONS**

GENERAL COMMENTS

The 1998 budget is a very aggressive plan which capitalizes on (1) recent developments in our core business, DCA/propanil (explained below), (2) favorable developments in ethephon, (3) very attractive short term opportunities in Custom Manufacturing, and (4) resolution of several plant problems which have negatively impacted costs for the last several years.

Although the business remains subject to changes from year to year, we have now achieved a new financial plateau for the future as a result of the business strategy put in place several years ago. The full year 1998 budget clearly demonstrates the potential for the Organic portion of Cedar's business in spite of our being a small, generic supplier in the markets which we serve.

Sales, gross margin, operating income and pretax income will exceed all previous levels. Sales are projected at \$53,288M, the first time we have exceeded \$50,000M. Gross margin is projected at \$10,304M and operating income should be \$10,365M after consolidation of Riceco results into Cedar's. Pretax income will approach \$6,800M, the best year ever. Full year 1992 reached a pretax level of \$5,680M but included over \$2,200M in one time benefits from termination of the Grace project.

PROPANIL

During 1997, Cedar and Westrade USA, Inc. formed a 50/50 limited liability corporation, Riceco, LLC, in which the propanil businesses of both Cedar and Westrade were contributed to the venture. Riceco is charged with the global responsibility for the marketing of all rice products on behalf of both partners as well as any products which Riceco may be able to attract from other suppliers. Our vision for Riceco is that it will become the premier marketing company for rice crop protection chemicals throughout the world. Riceco will operate independently and have its own management and banking relations.

Under the LLC agreement, Cedar will provide 100% of the propanil products required by Riceco as well as the DCA required for those products. Cedar will make a nominal margin on the products sold to Riceco as well as share in the margins generated by Riceco. Additionally, Cedar has been able to reduce its direct SG&A expenses associated with propanil sales by about 40% since Riceco will handle the marketing of propanil products, and Cedar will provide certain services to Riceco at a negotiated fee.

Initial reactions to the creation of Riceco are very positive with the idea of a company focused solely on one crop (rice), the major food crop of the world, being a novel and beneficial approach.

The prior propanil agreement with Rohm and Haas under which Cedar provides 100% of the Rohm and Haas requirements for the U.S. is not included in Riceco. Also, although Riceco has a right of first refusal for Cedar DCA used in propanil, Cedar is permitted to sell any excess DCA not required by Riceco. Riceco will have significant long term benefit to Cedar and is predicted to contribute over \$2,900M additional pretax income in 1998, the first full year of benefit from the Riceco venture.

The Rohm and Haas agreement mentioned above has been extended by an additional six (6) years through the year 2007. Cedar will continue to provide 100% of Rohm and Haas's requirements for the U.S. but the minimum guaranteed profit has been increased from \$0.075 per pound to \$0.20 per pound. Additionally, Cedar will provide all of the propanil technical required by Rohm and Haas for their European operations and have an option to provide all of the DCA required by Rohm and Haas for formulated goods in Europe.

OTHER PRODUCTS

This area of the business will have much improved results for 1998 solely the result of ethephon, while diuron and 2,4-DB (Butoxone) will continue to experience both pricing and volume pressure. Overall gross margin is projected to improve by over \$1,000M to \$1,649M.

During 1997 Cedar entered into a short term agreement with Rhone-Poulenc under which Cedar will assign its ethephon supply contract with Micro Flo to Rhone-Poulenc. In return, Rhone-Poulenc will pay Cedar a commission on ethephon sold to Micro Flo by Rhone-Poulenc and will utilize Cedar's manufacturing facility for certain Contract Manufacturing products. Once the economics of those the new products are finalized, the agreement will become long term.

The Butoxone product line will contribute about \$200M in gross margin during 1998 compared to recent levels of \$500M to \$750M as we take an aggressive approach to regaining market share lost during the effort to sell the Organics Division during 1996 and while concentrating on the formation of Riceco during 1997. New products introduced to the market have reduced the demand for Butoxone and as a result, prices have also dropped as suppliers seek to maintain volume in a shrinking market. We will consider selling Butoxone in the future if an acceptable price can be negotiated.

Diuron will continue to be under price pressure as well although product usage remains good. Cedar is not well positioned on the cost side, but this product remains very important from a strategic standpoint. We have entered into an engineering project with another party to provide domestic phosgenation which, if successful, will improve margins significantly, but not before the year 2000.

TOTAL PESTICIDES

Total sales for Pesticides will exceed \$38,750M even though transfer prices to Riceco are at a low level; gross margin will be essentially flat. Operating income will grow by ~\$3,000M, however, as the benefit of Riceco and improvements in other products are felt. Interest expense will be reduced by about \$430M due to improved payment terms through Riceco and reallocation of interest between Pesticides and Specialty Products, resulting in pretax income of ~\$5,250M, an improvement of \$3,460M over 1997.

SPECIALTY CHEMICALS

THAM sales will remain flat but margin will improve along with lower cost of sales. Inroads have been made with several major customers with potential for additional growth in the future. Gross margin will be ~\$800M, an improvement of ~\$500M over 1997.

Major improvement is predicted in Custom Manufacturing. The BFG and Zeneca contracts will continue with acceptable results while a new project from FMC will contribute approximately \$3,000M in gross margin. This project is a short term arrangement with potential for a longer term commitment by FMC.

For the first time, essentially all of the capacity for Custom Manufacturing is spoken for with only \$1,260M in sales (~10%) unidentified at this time. The strategy of aggressive growth for Custom Manufacturing is paying off with a number of potential projects being analyzed, most of which will require capital investment for new manufacturing facilities.

Overall, Specialty Chemicals will contribute about \$3,845M in gross margin, an improvement of ~\$2,885M. Operating income will increase by \$2,400M and SG&A will increase by \$-495M due to additional staff added in 1997 and reallocation of Corporate Administrative expenses. Interest expense will increase by \$1,010M due to the higher level of business and reallocation of interest between Specialty Chemicals and Pesticides, resulting in pretax income of ~\$1,535M compared to \$150M in 1997.

SG&A EXPENSE

Total SG&A will remain about the same with Pesticides down -\$600M and Specialty Chemicals up \$495M. The reduction in Pesticides gained by the creation of Riceco is offset by an increase to support new product development and acquisition efforts. The Specialty Chemicals increase is a result of additional staff in support of the business and the associated travel expenses. Corporate Administrative expense is down \$200M, and the allocation between Pesticides and Specialty Chemicals has been adjusted in favor of Pesticides.

CAPITAL EXPENDITURES

Capital expenditures of \$4,250M are planned with \$1,065M due to plant infrastructure needs as a result of recent and planned growth. Major DCA/propanil improvements and replacements will run \$1,585M, identified custom projects will require \$400M, cost reduction projects require \$770M, and the remainder, \$430M, is required for other general plant upkeep and maintenance of business replacement.

Cedar Chemical Corporation-West Helena
Projected Balance Sheet
December 31,

	<u>1997</u> Estimate	<u>1998</u> Budget
ASSETS		
Current Assets		
Cash	19	12
Accounts receivable	17,582	9,414
Inventories	12,301	10,595
Other current assets	699	75
Total current assets	30,601	20,096
Property, plant and equipment-net	16,757	18,067
Investment in Riceco	1,860	1,932
Other assets	521	437
	<u>49,739</u>	<u>40,532</u>
LIABILITIES AND SHAREHOLDER'S EQUITY		
Current Liabilities		
Accounts payable	9,524	3,593
Accrued expenses	2,220	362
Income taxes payable		
Total current liabilities	11,744	3,955
Other liabilities	750	750
Shareholder's equity:		
Common stock		
Inter-Company debt	37,245	31,481
Retained earnings		4,346
Total equity	<u>37,245</u>	<u>35,827</u>
	<u>49,739</u>	<u>40,532</u>

WEST HELENA PLANT
STATEMENT OF INCOME
For the Year Ended December 31,

	1996 Actual			1997 Estimate			1998 Budget		
	Qty	Unit Price	Total	Qty	Unit Price	Total	Qty	Unit Price	Total
DCA/Propanil:									
DCA lbs	1,082.4	1.33	1,439	842.1	1.42	1,193	725.0	1.55	1,124
Propanil Tech lbs	2,784.9	2.17	6,038	1,470.2	1.52	2,235	1,875.0	1.44	2,700
Flaked Tech lbs	1,902.1	1.33	2,535	3,497.6	1.55	5,425	4,066.1	1.45	5,889
Wham gls	180.0	13.20	2,376	357.7	13.99	5,003	400.4	9.60	3,844
55% Blend lbs							244.3	1.50	366
4# Propanil gls	335.2	12.60	4,224	364.5	11.06	4,031	652.2	9.53	6,216
3# Propanil gls	440.8	7.98	3,517	495.3	8.07	3,998	668.3	7.95	5,313
Stam	633.1	10.68	6,761	584.3	9.78	5,712	395.0	8.96	3,537
Misc.			24			-130			
Sub-Total Net Sales			26,915			27,467			28,989
Cost of Goods Sold			21,971			21,881			24,179
Gross Margin			4,944			5,586			4,810
Gross Margin %			18.4%			20.3%			16.6%
Other Products:									
Diuron lbs	2,438.5	2.71	6,605	2,192.7	2.58	5,668	1,950.0	2.75	5,363
Diuron Col lbs	234.3	2.10	491						
Bandit gls	2.9	17.24	50						
Tough gls			-1						
Pluck gls	95.0	-9.39	-892						
Ethephon lbs	344.2	3.30	1,138	1,283.5	1.93	2,483	2,250.0	1.15	2,586
Sale of Butoxone									
Butoxone 175 gls	37.3	23.07	861	33.8	18.89	639	50.0	16.48	823
Butoxone 200 gls	25.8	21.67	559	27.0	20.87	564	32.0	18.66	597
Butoxone 750 lbs	10.4	20.24	209	7.8	13.46	105	30.0	14.60	438
Sub-Total Net Sales			9,018			9,458			9,807
Cost of Goods Sold			9,985			8,433			8,158
Gross Margin			-967			1,025			1,649
Gross Margin %			-10.7%			10.8%			16.8%
Total Pesticides									
Net Sales			35,933			36,925			38,796
Cost of Goods Sold			31,956			30,314			32,338
Gross Margin			3,977			6,611			6,459
Gross Margin %			11.1%			16.6%			16.6%
S, G & A									
Direct			2,402			2,064			1,723
Allocated			587			540			283
Total SG&A			2,990			2,604			2,006
Joint Venture Income						485			3,069
Operating Income			987			4,493			7,522
Interest			2,412			2,699			2,267
Pretax Income			-1,425			1,794			5,255

	1996 Actual			1997 Estimate			1998 Budget		
	Qty	Unit Price	Total	Qty	Unit Price	Total	Qty	Unit Price	Total
Specialty Chemical									
TA lbs	484.4	5.30	2,569	603.6	5.07	3,061	600.0	5.12	3,072
Trometamol lbs	0.4	9.75	4	3.2	5.94	19			
Sub-Total Net Sales			2,573			3,080			3,072
Cost of Goods Sold			2,623			2,782			2,273
Gross Margin			-50			298			799
Gross Margin %			-1.9%			9.7%			26.0%
Custom Manufacturing:									
Acifluorfen lbs	297.9	3.75	1,116	1,893.4	2.05	3,469	1,983.8	1.81	3,590
BFG lbs	4,796.3	0.29	1,397	7,505.8	0.30	2,220	6,875.0	0.23	1,600
Butyl Chloride lbs	284.4	0.41	116	274.1	0.40	111			
Cypermethrin lbs	178.1	4.29	764						
Dehpa lbs	970.1	0.42	409						
Graphsize lbs	2002.7	0.56	1,131						
Permethrin lbs	67.9	3.34	227	189.4	3.29	624			
FMC-5/Nitro lbs							471.0	10.55	4,969
Other						163	630.0	2.00	1,260
Sub-Total Net Sales			5,160			6,587			11,419
Cost of Goods Sold			6,355			5,924			8,372
Gross Margin			-1,195			663			3,047
Gross Margin %			-23.2%			10.1%			26.7%
Total Specialty/Custom									
Net Sales			7,733			9,667			14,491
Cost of Goods Sold			8,978			8,706			10,646
Gross Margin			-1,245			961			3,845
Gross Margin %			-16.1%			14.5%			26.5%
S, G & A									
Direct			355			448			891
Allocated			65			60			112
Total SG&A			420			508			1,003
Operating Income			-1,665			453			2,842
Interest			268			302			1,309
Pretax Income			-1,933			152			1,533
Environmental (Info Only)									
			126			80			230
(Note: Shown in Propanil Domestic)									
Total Organics									
Net Sales	% Sales		43,666	% Sales		46,592	% Sales		53,288
Cost of Goods Sold	100.0%		40,934	100.0%		39,020	100.0%		42,984
Gross Margin	93.7%		2,732	83.7%		7,572	80.7%		10,304
S, G & A									
Direct	6.3%		2,757	5.4%		2,512	4.9%		2,614
Allocated	1.5%		652	1.3%		600	0.7%		395
Total S,G&A			3,410			3,112			3,009
Joint Venture Income				1.0%		485	5.8%		3,069
Operating Income	-1.6%		-678	10.6%		4,946	19.4%		10,364
Interest	6.1%		2,680	6.4%		3,000	6.7%		3,576
Income Before Tax	-7.7%		-3,358	4.2%		1,946	12.7%		6,788

1/22/98

WEST HELENA PLANT
QUANTITIES SOLD/PRODUCED
For the Year Ended December 31,

	<u>1996 Actual</u>	<u>1997 Estimate</u>	<u>1998 Budget</u>
DCA			
Pounds Sold - Domestic	1,082,418	842,180	725,000
Avg Net Selling Pr/lb	\$1.33	\$1.42	\$1.55
Pounds Produced	11,039,070	11,624,630	12,935,000
Mfg Cost/Pound	\$1.15	\$1.17	\$1.06
DIURON			
Pounds Sold	2,438,489	2,192,793	1,950,000
Avg Net Selling Pr/lb	\$2.71	\$2.58	\$2.75
Pounds Produced	1,958,997	2,526,650	1,000,000
Mfg Cost/Pound	\$2.75	\$2.61	\$2.59
DIURON COL			
Pounds Sold	234,315		
Avg Net Selling Pr/lb	\$2.10		
Pounds Produced	254,991		
Mfg Cost/lb	\$1.95		
PROPANIL TECH			
Pounds Sold - Domestic	2,784,860	1,470,240	1,875,000
Avg Net Selling Pr/lb	\$2.17	\$1.52	\$1.44
Pounds Produced	10,751,255	13,001,533	14,971,000
Mfg Cost/lb	\$1.15	\$1.18	\$1.07
FLAKED TECH			
Pounds Sold - Domestic	1,902,108	3,497,692	4,066,094
Avg Net Selling Pr/lb	\$1.33	\$1.55	\$1.45
Pounds Produced	2,686,500	6,013,500	6,450,000
Mfg Cost/Pound	\$1.13	\$1.23	\$1.12
55% BLEND			
Pounds Sold - Export			244,320
Avg Net Selling Pr/lb			\$1.50
Pounds Produced			244,000
Mfg Cost/Pound			\$1.01

1/22/98

WEST HELENA PLANT
QUANTITIES SOLD/PRODUCED
For the Year Ended December 31,

	<u>1996 Actual</u>	<u>1997 Estimate</u>	<u>1998 Budget</u>
PROPANIL 3#			
Gallons Sold - Export	440,809	495,378	668,336
Avg Net Sell Pr/Gl	\$7.98	\$8.07	\$7.95
Gallons Produced	429,417	487,778	670,000
Mfg Cost/Gallon	\$7.15	\$7.47	\$7.08
PROPANIL 4#			
Gallons Sold - Domestic	335,158	364,551	652,242
Avg Net Sell Pr/Gl	\$12.60	\$11.06	\$9.53
Gallons Produced	336,285	343,622	651,000
Mfg Cost/Gallon	\$8.22	\$8.44	\$8.18
WHAM			
Gallons Sold - Domestic	180,020	357,829	400,405
Avg Net Sell Pr/Gl	\$13.20	\$13.98	\$9.60
Gallons Produced	122,605	381,779	382,000
Mfg Cost/Gallon	\$11.14	\$8.36	\$7.79
BANDIT			
Gallons Sold	2,853		
Avg Net Sell Pr/Gl	\$17.74		
Gallons Produced	2,853		
Mfg Cost/Gallon	\$16.02		
STAM			
Gallons Sold	633,060	584,362	395,000
Avg Net Sell Pr/Gl	\$10.68	\$9.78	\$8.96
Gallons Produced	654,418	613,797	396,000
Mfg Cost/Gallon	\$8.89	\$8.54	\$8.39

WEST HELENA PLANT
QUANTITIES SOLD/PRODUCED
For the Year Ended December 31,

	<u>1996 Actual</u>	<u>1997 Estimate</u>	<u>1998 Budget</u>
BUTOXONE 7500			
Cases Sold	10,350	7,886	30,000
Avg Net Sell Pr/Case	\$20.24	\$13.36	\$14.60
Cases Produced	33,930		20,000
Mfg Cost/Case	\$13.39		\$13.65
BUTOXONE 175			
Gallons Sold	37,307	33,884	50,000
Avg Net Sell Pr/Gl	\$23.07	\$18.85	\$16.45
Gallons Produced	42,199	16,875	46,000
Mfg Cost/Gallon	\$10.57	\$12.25	\$12.22
BUTOXONE 200			
Gallons Sold	25,787	27,087	32,000
Avg Net Sell Pr/Gl	\$21.67	\$20.80	\$18.65
Gallons Produced	50,287	15,969	31,000
Mfg Cost/Gallon	\$12.24	\$15.16	\$13.68
ETHEPHON			
Gallons Sold	344,200	1,283,517	2,250,000
Avg Net Sell Pr/Gl	\$3.30	\$1.93	\$1.15
Gallons Produced		351,517	1,000,000
Mfg Cost/Gl		\$4.20	\$1.24
PLUCK			
Gallons Sold	95		
Avg Net Sell Pr/Gl	-\$9,391.90		
Gallons Produced			
Mfg Cost/Gallon			
CUSTOM PROJECTS			
Sales Dollars	\$7,733,433	\$9,666,971	\$14,491,385
(Detail on W.Helena Statement)			
Unit 1 Cost	1,677,301	2,210,986	3,617,052
Unit 4 Cost	2,280,603	2,371,363	2,505,063
Unit 5 Cost	2,488,734	3,138,860	3,813,311
Total Unit Cost	6,446,638	7,721,209	9,935,426

Cedar Chemical Corporation
West Helena Plant
Cost of Goods Sold
For the Years Ending December 31,

	1996	1997	1998
	Actual	Estimate	Budget
Raw Materials Used	20,233,689	19,030,447	20,797,847
Pkg Materials & Containers	1,415,057	1,433,791	1,458,339
Finished Goods Purchased	3,204,081	5,311,536	
Salaries, Wages & Fringes	6,067,917	6,636,286	6,749,053
Utilities	1,581,401	1,730,629	1,812,077
Maintenance	1,378,125	1,509,032	1,727,280
Contract Labor	702,508	821,592	959,660
Operating Supplies	737,296	826,841	849,576
Waste Treatment	1,004,776	761,427	847,905
Contract Formulation Fees	459,172	451,081	536,700
Insurance & Taxes	644,887	762,152	860,473
Professional Fees	742,980	377,827	668,088
Royalties & Quantity Discounts	1,187,803	175,000	150,000
Lease/Rental Expense	262,588	554,641	486,368
Product Complaint	18,487	46,172	46,400
Start-Up Cost	228,361	55,164	55,164
Task Force	350,004	373,496	179,988
Travel & Entertainment	79,138	76,938	128,196
Fees & Tuitions	40,813	46,011	58,176
Communications	55,848	61,415	59,412
In Bond Freight	49,110	94,701	69,102
Depreciation	2,143,477	2,512,806	2,940,660
Other Cost	(2,236)	42,087	60,612
Total Cost	42,585,282	43,691,072	41,501,076
Change in Inventory	(1,651,797)	(4,670,201)	1,483,000
Total Cost of Goods Sold	40,933,485	39,020,871	42,984,076

Cedar Chemical Corporation - West Helena
Capital Expenditures Budget
1998

<u>Description</u>	<u>Amount</u>
SAFETY & HEALTH:	
Safety Showers	25,000
PSU, Autoclave Unit 5	30,000
Miscellaneous	50,000
ENVIRONMENTAL:	
Aerators	65,000
Storage Tank Vents	50,000
MAINTENANCE OF BUSINESS:	
SPECIALITY & CUSTOM:	
Reactor Replacements	210,000
DCA/PROPANIL SUPPORT:	
Reactor Replacement (R-4)	500,000
S6601, Pit Replacement	25,000
Tank for Prop. Cooling	80,000
T-6203, Sulfuric Acid Storage	75,000
T-6202, Nitric Acid Storage	150,000
T-6302, Mixed Acid	80,000
V-6104, re clad, coil replacement	350,000
T-6208, crud storage coils	50,000
R-6106, Dist. Vessel Coils	250,000
Vent Condensors, blend tanks	25,000
GENERAL PLANT:	
QC Lab Expansion	265,000
R & D Lab	50,000
Office Expansion	100,000
Power Distribution	300,000
Change Room Expansion	150,000
RR Spur Expansions	200,000
COST IMPROVEMENTS:	
2,3 Centrifuge	400,000
Condensate Return	250,000
Hydrogen/Zero Air Generators	20,000
Miscellaneous	100,000
MAJOR CEDAR & TOLL PROJECTS:	
Ethephon	200,000
BFG 85% on Stream	200,000
CARRY OVER:	
From Previous Year	0
To Next Year	0
	<u>4,250,000</u>

Cedar Chemical Corporation-West Helena
Projected Balance Sheet
1998

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ASSETS												
Current Assets												
Cash	12	12	12	12	12	12	12	12	12	12	12	12
Accounts receivable	17,430	17,011	16,079	16,015	16,066	13,255	10,563	9,561	8,135	9,070	10,002	9,414
Inventories	10,389	10,697	11,408	11,785	11,180	11,348	11,247	11,831	11,776	10,059	9,944	10,595
Other current assets	732	665	598	531	464	397	410	343	276	209	142	75
Total current assets	28,563	28,385	28,097	28,343	27,722	25,012	22,232	21,747	20,199	19,350	20,100	20,096
Property, plant and equipment-net	16,737	17,367	17,852	18,172	18,362	18,437	18,642	18,642	18,547	18,532	18,312	18,067
Investment in Riceco	2,260	2,856	3,320	3,950	4,438	4,504	3,296	3,326	3,260	1,562	1,647	1,932
Other assets	515	509	503	497	491	485	477	469	461	453	445	437
	48,075	49,117	49,772	50,962	51,013	48,438	44,647	44,184	42,467	39,897	40,504	40,532
LIABILITIES AND SHAREHOLDER'S EQUITY												
Current Liabilities												
Accounts payable	7,146	5,709	7,701	8,136	6,932	5,250	4,017	4,002	3,164	2,696	2,812	3,593
Accrued expenses	1,239	813	768	714	611	504	428	428	428	428	405	362
Income taxes payable												
Total current liabilities	8,385	6,522	8,469	8,850	7,543	5,754	4,445	4,430	3,592	3,124	3,217	3,955
Other liabilities	750	750	750	750	750	750	750	750	750	750	750	750
Shareholder's equity:												
Common stock												
Inter-Company debt	38,616	40,868	38,940	39,031	39,812	39,100	36,551	36,043	35,369	33,064	32,992	31,481
Retained earnings	324	977	1,613	2,331	2,908	2,834	2,901	2,961	2,756	2,959	3,545	4,346
Total equity	38,940	41,845	40,553	41,362	42,720	41,934	39,452	39,004	38,125	36,023	36,537	35,827
	48,075	49,117	49,772	50,962	51,013	48,438	44,647	44,184	42,467	39,897	40,504	40,532

Cedar Chemical Corporation-West Helena
Projected Statement of Income and Retained Earnings
1998

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Net sales	5,531	5,247	5,073	5,663	5,594	3,427	3,539	3,103	2,807	4,583	4,237	4,484	53,288
Cost and expenses													
Cost of goods sold	4,976	4,361	4,069	4,599	4,605	3,051	2,901	2,472	2,496	3,663	2,806	2,985	42,984
General and													
Administrative	194	196	201	287	282	263	268	256	255	275	264	268	3,009
Income from Riceco	400	596	464	630	488	66	42	30	(66)	(12)	73	358	3,069
Operating income	761	1,286	1,267	1,407	1,195	179	412	405	(10)	633	1,240	1,589	10,364
Interest expense	265	275	284	295	304	305	308	311	311	316	325	337	3,636
Interest income	10	10	10	10	10	10							60
Income before taxes	506	1,021	993	1,122	901	(116)	104	94	(321)	317	915	1,252	6,788
Income tax expense	182	368	357	404	324	(42)	37	34	(116)	114	329	451	2,442
Net income	324	653	636	718	577	(74)	67	60	(205)	203	586	801	4,346
Beg retained earnings		324	977	1,613	2,331	2,908	2,834	2,901	2,961	2,756	2,959	3,545	
End retained earnings	324	977	1,613	2,331	2,908	2,834	2,901	2,961	2,756	2,959	3,545	4,346	4,346

Cedar Chemical Corporation-West Helena
Projected Statement of Changes in Financial Position
1998

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Operating activities:													
Net income	324	653	636	718	577	(74)	67	60	(205)	203	586	801	4,346
Items not requiring cash:													
Amortization	6	6	6	6	6	6	8	8	8	8	8	8	84
Depreciation	245	245	245	245	245	245	245	245	245	245	245	245	2,940
Total	575	904	887	969	828	177	320	313	48	456	839	1,054	7,370
Management of operating assets and liabilities:													
Accounts receivable	152	419	932	64	(51)	2,811	2,692	1,002	1,426	(935)	(932)	588	8,168
Inventories	1,912	(308)	(711)	(377)	605	(168)	101	(584)	55	1,717	115	(651)	1,706
Other current assets	(33)	67	67	67	67	67	(13)	67	67	67	67	67	624
Accounts payable	(2,378)	(1,437)	1,992	435	(1,204)	(1,682)	(1,233)	(15)	(838)	(468)	116	781	(5,931)
Accrued expenses	(981)	(426)	(45)	(54)	(103)	(107)	(76)				(23)	(43)	(1,858)
Cash provided (used) by operating activities	(753)	(781)	3,122	1,104	142	1,098	1,791	783	758	837	182	1,796	10,079
Investment activities:													
Additions to property, plant and equipment	(225)	(875)	(730)	(565)	(435)	(320)	(450)	(245)	(150)	(230)	(25)		(4,250)
Inter-company debt	1,371	2,252	(1,928)	91	781	(712)	(2,549)	(508)	(674)	(2,305)	(72)	(1,511)	(5,764)
Cash provided(used) by financing activities	1,371	2,252	(1,928)	91	781	(712)	(2,549)	(508)	(674)	(2,305)	(72)	(1,511)	(5,764)
Increase (decrease) in cash	(7)												(7)
Beginning cash balance	19	12	12	12	12	12	12	12	12	12	12	12	19
Ending cash balance	12	12	12	12	12	12	12	12	12	12	12	12	12

Cedar Chemical Corporation
Capital Expenditures Budget
1998
West Helena Plant

	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
PROJECT DESCRIPTION													
SAFETY & HEALTH													
Safety Showers					25								25
PSU, Autoclave Unit 5			30										30
Miscellaneous					50								50
ENVIRONMENTAL													
Aerators								65					65
Storage Tank Vents		50											50
MAINTENANCE OF BUSINESS													
SPECIALTY CUSTOM													
Reactor Repalcements				100	110								210
DCA/PROPANIL SUPPORT													
Reactor Replacement (R-4)			300	200									500
S-6601, Pit Replacement											25		25
Tank for Prop Cooling										80			80
T-6203, Sulfuric Acid Storgae			75										75
T-6202, Nitric Acid Storage		75	75										150
V-6302, Mixed Acid								80					80
R-6104, re clad, coil replacement					200	150							350
T-6208, crud storage coils									50				50
R-6106, Dist. Vessel Coils							200	50					250
Vent Condensors, Blend Tanks	25												25
GENERAL PLANT													
QC Lab Expansion			100	165									265
R & D Lab					50								50
Office Expansion				100									100
COST IMPROVEMENTS													
2,3 Centrifuge	150	250											400
Condensate Return							100			150			250

Cedar Chemical Corporation
Capital Expenditures Budget

1998
West Helena Plant

	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Hydrogen/Zero Air Generators						20							20
Miscellaneous	50	50											100
MAJOR CEDAR & TOLL PROJECTS													
Power Distribution						150	150						300
Change Room Expansion								50	100				150
RR Spur Expansions		150	50										200
Ethephon		200											200
BFG 85% on Stream		100	100										200
Total spending	225	875	730	565	435	320	450	245	150	230	25		4,250

**CEDAR CHEMICAL CORPORATION
ORGANICS DIVISION
FIVE YEAR FORECAST**

GENERAL OVERVIEW

Results for the five (5) year period reflect the 1992 Organics Strategy implementation with subsequent modifications. Pretax income will grow from \$1.8MM in 1997 to over \$12.0MM in 2002 with cumulative pretax income of over \$50MM for the period 1998-2002, remarkable results for a small, generic manufacturer of agricultural intermediates for ourselves and others and of a limited number of proprietary pesticides. This forecast validates the commitment of management and the confidence of TRI to the Organics business and this management team, especially after the poor results for 1996.

Like the 1998 budget, the five (5) year plan is very aggressive. It assumes no significant negative factors and only positive improvements, perhaps somewhat optimistic, but we believe possible with good product stewardship and management attention. To put it into perspective, the cumulative pretax income in this plan is about \$16MM more than even the upside plan presented last fall.

In Pesticides, by far the most significant improvement over the prior plan is the implementation of Riceco. Because of the manner in which sales to Riceco and income from Riceco are accounted for, it is not possible to compare individual product groupings directly to the prior plan. It is, however, clear that expectations for Riceco are very high.

We also anticipate very good improvement in other Pesticide products due to expected contractual improvements in ethephon sales and improved manufacturing cost position in diuron over the period.

Specialty Chemicals continues to track the strategy implemented during late 1996 and 1997. Short term benefits of the FMC project are realized, but in the later years there is more speculation in the sales forecast with over one third of the sales unidentified at this time. Changes in the manner of interest and plant overhead allocation, although thought to be more appropriate, have a significant negative impact on overall financial results for Specialties. In spite of this, operating income tracks the prior forecast very closely.

PROPANIL

Riceco is fully operational during the period with improvement projected in both sales prices and product mix. The plan assumes new combination product additions which will improve mar

gins as well as increase use of propanil. Price increases are assumed to be about 2.5% per year. Although gross margin of sales to Riceco are flat during the period, the income from Riceco grows from about \$2.0MM in 1998 to over \$5.0MM by 2002 in spite of continued pressure from competing products and threats from other potential propanil producers in China, India, and Brazil. It is assumed that the new combination products and additional products that might be sold by Riceco more than offset any reduction due to competitive factors, a bold assumption.

The plan also benefits from an extension of the Rohm and Haas domestic propanil supply agreement with financial improvements as well as a new agreement to supply Rohm and Haas both DCA and propanil in Europe.

OTHER PRODUCTS

Significant improvements are seen during the period as a result of a new ethephon supply agreement involving both Rhone-Poulenc and Micro Flo, Cedar's former customer. Through an assignment of the supply agreement with Micro Flo to Rhone-Poulenc and associated production of ethephon and other products for Rhone-Poulenc, gross margin will improve over the prior plan by about \$750M to \$1,000M per year.

Diuron prices are expected to improve about 3.5% per year as the market is rationalized somewhat following the DuPont-Griffin deal. Additionally, in an effort to enhance the relationship between Rhone-Poulenc and Cedar, Rhone-Poulenc will reduce the cost of diuron raw material (DCPI) temporarily after which Cedar will have a new tolling agreement in place for domestic phosgenation.

The only problem area for Other Pesticide Products will be the Butoxone product line. New competitive chemistry, a declining market, a new competitor, lack of a full marketing staff (after Riceco), and concerns over product safety will continue the decline experienced during 1997. The plan assumes the sale of the product line by the year 2001; it could be sooner if the right opportunity presents itself.

Overall results for Other Products shows good improvement in gross margin from \$1.8MM to over \$4.5MM by the year 2002, more than doubling the prior forecast, excluding the sale of Butoxone.

TOTAL PESTICIDES

Total sales of Pesticides will remain flat during the period due to flat sales to Riceco and sale of the Butoxone product line. Operating income will, however, grow from \$7.5MM to \$13.0MM, a very aggressive plan and over double the prior five year forecast. In addition to the improvements listed above, Pesticides will benefit from a reallocation of plant overhead, Corporate Administrative charges, and interest, all of which we believe more accurately reflect the state of the business today and for the plan period. As a result, Pesticides will contribute \$45.7MM to pretax income over the five (5) year period, an improvement of over \$35MM for the period compared to the prior forecast.

SPECIALTY CHEMICALS

The long range commitment to Specialty Chemicals, especially Custom Manufacturing, pays off in the five year plan. Although the present plan is consistent with the prior plan and the Custom Manufacturing Strategy implemented late last year, the success is hidden somewhat because of reallocation of overheads and interest.

THAM results are consistent with the prior plan. The strategy of gradually growing market share while avoiding a reaction from the competition continues. Gross margin, however, remains flat as prices also remain flat while costs increase about 2.5% per year. Sales of 2,3-DCNB from the prior plan have been dropped due to continued problems with 2,3-DCNB purity from isomer separation and no justification for further improvement at this time. This reduces gross margin about \$250M per year.

Custom Manufacturing sales are actually down somewhat from the prior plan but gross margin is up from about \$11MM to \$14MM for the period due to the opportunistic results of the FMC project for 1998 and 1999. The sales forecast for last year was more speculative and thus, a little higher than the present plan. The plan assumes that both Zeneca and BFG contracts continue, but FMC terminates during 1999. In the latter years, approximately 35-40% of the sales forecast is from unidentified projects and assumes that those projects can be consummated with little disruption to sales. Based on the Custom Manufacturing strategy and present level of business opportunities, we believe that to be possible. Some capital investment, as yet unidentified, will probably be required.

Overall, Specialty Chemicals will contribute \$13.3MM in operating income for the five years compared to the prior forecast of

\$12.3MM. Pretax income will drop from about \$8.1MM to \$4.7MM, however, as a result of reallocation of interest and overhead expenses to the benefit of Pesticides.

SG&A EXPENSE

Total SG&A will decrease by \$8.6MM during the five year period compared to the prior forecast, a major contributor to the overall improvement. Over \$1.5MM per year in SG&A expenses was eliminated by the creation of Riceco. Direct expenses for SG&A is assumed to increase 2.5% while Corporate Administrative expense is assumed to remain flat.

INTEREST EXPENSE

Interest expense is based on use of assets. The allocation between Pesticides and Specialties has been recalculated with a significant drop in Pesticides and a corresponding increase in Specialties. Total interest is projected at \$3.5MM to \$3.9MM per year, about the same as the prior forecast.

CAPITAL EXPENDITURES

Capital expenditures over the period will run \$3.0MM to \$4.0MM per year, an increase from the prior plan, primarily to further improve plant reliability and infrastructure, i.e., labs, rail siding, etc. We also anticipate further expansion of our DCA facility in order to supply all of Riceco's needs as well as the remaining Cedar needs for propanil for Rohm and Haas and diuron. There is no money in the plan for new Custom projects as we have no definition of probable costs without having a better feel for the specific projects. It is likely that additional funds will be required, particularly if we expand the Custom business beyond the present plan.

1/22/98

WEST HELENA PLANT

STATEMENT OF INCOME

	1996 Actual			YTD 12/31/97 Est.			1998 Budget			1999 FORECAST			2000 FORECAST			2001 FORECAST			2002 FORECAST		
	Qty	Unit Price	Total	Qty	Unit Price	Total	Qty	Unit Price	Total	Qty	Unit Price	Total	Qty	Unit Price	Total	Qty	Unit Price	Total	Qty	Unit Price	Total
DCA/Propanil:																					
DCA	1,082.4	1.33	1,439	842.1	1.42	1,193	725.0	1.55	1,124	700.0	1.50	1,050	800.0	1.45	1,160	900.0	1.50	1,350	1,000.0	1.55	1,550
Propanil Tech lbs	2,784.9	2.17	6,038	1,470.2	1.52	2,235	1,875.0	1.44	2,700	1,950.0	1.52	2,964	1,900.0	1.51	2,869	1,850.0	1.54	2,849	1,750.0	1.49	2,608
Flaked Tech lbs	1,902.1	1.33	2,535	3,497.8	1.55	5,425	4,088.1	1.45	5,889	2,480.0	1.45	3,600	2,050.0	1.48	3,002	1,750.0	1.50	2,627	1,450.0	1.51	2,185
Whem gts	180.0	13.20	2,376	357.7	13.99	5,003	400.4	9.60	3,844	525.0	9.93	5,213	575.0	9.89	5,687	600.0	10.01	6,006	575.0	9.83	5,652
55% Blend lbs							244.3	1.50	366												
4# Propanil gts	335.2	12.60	4,224	384.5	11.06	4,031	652.2	9.53	6,216	600.0	9.84	5,904	575.0	9.80	5,635	575.0	9.83	5,710	550.0	9.75	5,363
3# Propanil gts	440.8	7.98	3,517	495.3	8.07	3,998	668.3	7.95	5,313	625.0	8.35	5,219	600.0	8.32	4,992	550.0	8.41	4,626	500.0	8.28	4,140
Slam lbs	633.1	10.68	6,761	584.3	9.78	5,712	395.0	8.98	3,537	600.0	7.15	4,287	580.0	7.30	4,236	550.0	7.47	4,107	510.0	7.53	3,833
Misc.			24			-130															
Sub-Total Net Sales			26,915			27,487			28,989			28,237			27,581			27,274			25,390
Cost of Goods Sold			21,971			21,881			24,179			23,408			23,407			23,311			22,409
Gross Margin			4,944			5,586			4,810			4,837			4,174			3,963			2,981
Gross Margin %			18.4%			20.3%			16.6%			17.1%			15.1%			14.5%			11.7%
Other Products:																					
Diuron lbs	2,438.5	2.71	6,605	2,192.7	2.58	5,668	1,950.0	2.75	5,383	2,250.0	2.80	6,300	2,500.0	2.90	7,250	2,750.0	3.10	8,525	3,000.0	3.20	9,600
Diuron Col lbs	234.3	2.10	491																		
Bandit gts	2.9	17.24	50																		
Tough gts			-1																		
Pluck cs	95	-9.39	-892																		
Ethephon lbs	344.2	3.30	1,138	1,283.5	1.93	2,483	2,250.0	1.15	2,588	1,250.0	1.45	1,813	1,250.0	1.55	1,938	1,250.0	1.85	2,083	1,250.0	1.75	2,188
Sale of Butoxone																					
Butoxone 175 gts	37.3	23.07	861	33.8	18.89	639	50.0	18.48	923	40.0	18.50	740	30.0	17.50	525						
Butoxone 200 gts	25.8	21.87	559	27.0	20.87	564	32.0	18.68	597	30.0	21.00	630	20.0	20.00	400						
Butoxone 750 lbs	10.4	20.24	209	7.8	13.46	105	30.0	14.60	438	20.0	12.50	250	10.0	11.75	118						
Sub-Total Net Sales			9,018			9,458			9,807			9,733			10,230			10,588			11,788
Cost of Goods Sold			9,985			8,433			8,158			7,219			7,060			6,326			7,050
Gross Margin			-967			1,025			1,649			2,514			3,170			4,263			4,738
Gross Margin %			-10.7%			10.8%			16.8%			25.8%			31.0%			40.3%			40.2%
Total Pesticides																					
Net Sales			35,933			36,925			38,796			37,970			37,811			37,862			37,178
Cost of Goods Sold			31,956			30,314			32,338			30,619			30,487			29,636			29,459
Gross Margin			3,977			6,611			6,459			7,351			7,344			8,226			7,719
Gross Margin %			11.1%			18.6%			16.6%			19.4%			19.4%			21.7%			20.8%
Sale of Product Line S, G & A																		2,000			
Direct			2,402			2,084			1,723			1,775			1,828			1,883			1,939
Allocated			587			540			283			290			291			293			293
Total SG&A			2,990			2,604			2,006			2,065			2,119			2,176			2,232
Joint Venture Income						485			3,069			3,977			3,947			4,862			5,534
Operating Income			887			4,493			7,522			9,263			9,172			12,912			11,821
Interest			2,412			2,689			2,287			2,334			2,381			2,429			2,477
Pretax Income			-1,425			1,794			5,255			6,929			6,791			10,483			8,544

JAN 98

AB0000079480

Bayer - DCA

Load Jan

	Date	Inv #	RR#	Drms	Net	Lbs	US\$	Per # Price
DCA Purchase	1/12/98	3041757	11028			43,740	80,481.60	1.840
DCA Purchase	1/12/98	3041775	11082			44,445	81,778.80	1.840
DCA Purchase	1/12/98	3041772	11063			44,181	81,293.04	1.840
DCA Purchase	1/16/98	3041766	11089			42,064	77,397.76	1.840
DCA Purchase	1/16/98	3041765	11090			43,034	79,182.56	1.840
DCA Purchase	1/22/98	3041770	11130			42,990	79,101.60	1.840
DCA Purchase	1/23/98	3041780	11165			44,754	82,347.36	1.840
DCA Purchase	1/23/98	3041778	11169			42,417	78,047.28	1.840
DCA Purchase	1/18/98	3041773	11129			43,078	79,263.52	1.840
DCA Purchase	1/23/98	3041784	11188			41,888	77,073.92	1.840
DCA Purchase	2/5/98	3041783	11191			41,447	76,262.48	1.840
						474,038		
Ocean Freight	1/24/98	41005					5,142.50	0.011
Ocean Freight	1/7/98	41004					5,579.50	0.012
Ocean Freight	12/9/97	41003					6,509.00	0.014
Ocean Freight	12/5/97	41002					4,599.50	0.010
Ocean Freight	1/28/98	53293					3,030.32	0.006
Duty	12/31/97	53080					7,119.50	0.015
Duty	11/8/97	41001					4,165.00	0.009
Inland Freight	3/13/98	41008					2,389.50	0.005
Containers Renta	2/28/98	982102945					1,092.00	
Total Cost delivered to Plant							911,856.74	1.924

Accounting:		\$ Dollars	Unit Cst
C153-5910		873,321.92	
C153-5920		38,534.82	
Total	474,038	911,856.74	1.924

REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3041757

DATE: 01-12-98 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

West Helena Acct Dept.

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

RECEIVED
JAN 15 1998
RECEIVED

1-9-98
11028

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT.

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041757 DATE: 01-12-98
FREIGHT: COLLECT DATE SHIPPED: 01-02-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	43,740.00	1.84	80,481.60

080081 06Y63642

BULK CONT: SNIU121295 GW: 50,000 TW: 6,260 NW: 43,740 (EBS)
ASSAY: 100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

ENTERED
JAN 30 1998

WEST HELENA

E 80,481.60

VENDOR #		INVOICE #	
2987		3041757	
P.O. #	REC. RPT #	INV. CD	INV. DATE
87455		1	011298
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
3			
INVOICE AMT		DISC ALLOWED	
80,481.60			
GL NUMBER	AMOUNT		WORK ORDER #
C153 5910	80,481.60		
DONE BY		DATE	APPROVED BY
RK		1-28-98	OK
		ENTERED BY	

LAST PAGE
RATTON

**0080

IF IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

RAW MATERIAL RECEIVING RECORD

11'28

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0840

RECEIVED BY

B. McQuinn

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

1-3-98

N/A

S/C#

SNEU-181295-0

Net

N/A 43739

SHIPPER

Bayer Corp

CARRIER

Triple E

QUANTITY

CONTAINER

DESTINATION

RAW MAT CODE #

DESCRIPTION

1

S/C

Unit #6

40100 (3rd Party)

DCA

COMMENTS

CofA was fax to Cedar Lab,

Per, V. FOSTER

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

M. Xing

7:50

UNLOADED AT (tank number, unit, warehouse, etc.)

SFC # Unit 6

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

PT

✓

COMMENTS

99.9

SECTION 4

PLANT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

D. Jahn

✓

PLANT WEIGHT

UNLOADING TIMES

NET

START TIME

0950 1/3/97

END TIME

COMMENTS

West Helena Art. Dent.

REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

RECEIVED
JAN 15 1998
RECEIVED

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO:3041775

DATE: 01-12-98 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

1-9-98
11062

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #:04-087455
FOB:NEW ORLEANS, LA

ORDER INVOICE NO: 3041775 DATE: 01-12-98
FREIGHT: COLLECT DATE SHIPPED: 01-08-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	44,445.00	1.84	81,778.80

080081 06Y63650
BULK CONT:SNIU121110 GW: 50,000 TW: 5,555 NW: 44,445 (LBS)
ASSAY%100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

ENTERED

JAN 30 1998

VALLENA

[illegible]

81,778.80

LAST PAGE
RATION

****0082**

ED IN YOUR PURCHASE ORDER. YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

~~AB0000079480~~

RAW MATERIAL RECEIVING RECORD

N 11062

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0620

RECEIVED BY

DL

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
1/9/98	04-087455	SNV121110-5	Net NA 44445

SHIPPER

Bayer

CARRIER

Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit 6	40100	DCA

COMMENTS

C of A was faxed

SECTION 2

RECIPIENT	TIME SAMPLE CERTIFICATE TAKEN TO LAB
E. J. Kinsler	0750

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

Probed at 7:22:11 To unload at 9:45:00

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
YLF	✓		

COMMENTS

DCA 99.7

H2O .02

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
McBride	✓		

PLANT WEIGHT

UNLOADING TIMES

NET

START TIME

0800

END TIME

COMMENTS



REMIT TO:

BAYER CORPORATION

P.O. BOX 75662

CHARLOTTE, NC 28275-5662

ORDER INVOICE

BILL TO: 005761-001

West Helena Acct. Dept.

RECEIVED
JAN 15 1998
NO. 3041772

FIBERS ORGANICS AND RUBBER DIV

100 BAYER ROAD

PITTSBURGH, PA. 15205

DATE: 01-12-98 CO-21 DIV-10 DP-0012

SHIP TO: 005761-001

CEDAR CHEMICAL CORP

P.O. BOX 2749

W HELENA AR 72390

CEDAR CHEMICAL CORP

HWY 242 S

W HELENA AR 72390

1-9-98
11063

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-087455

FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041772

DATE: 01-12-98

FREIGHT: COLLECT

DATE SHIPPED: 01-08-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	44,181.00	1.84	81,293.04

080081 06Y63648

BULK CONT: SNIU121333 GW: 50,000 TW: 5,819 NW: 44,181 (EBS)
ASSAY: 100.00

ENTERED

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

JAN 30 1998

WEST HELENA

VENDOR #		INVOICE #	
2987		3041772	
P.O. #	REC. RPT. #	INV CD	INV DATE
87455		1	011298
TERMS CODE	DUE DATE	FRT BIL CD	SALES ORDER #
2			
INVOICE AMT.		DISC ALLOWED	
81,293.04			
GL NUMBER	AMOUNT	WORK ORDER #	
C 1535910	81,293.04		
DATE		APPROVED BY	
01/12/98		[Signature]	
DONE BY		ENTERED BY	
[Signature]		[Signature]	

E

81,293.04

LAST PAGE
ATION

**0081

ED IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDEIncorporation, Pittsburgh, PA 15205-0741
1280000079480

RAW MATERIAL RECEIVING RECORD

11'63

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

RECEIVED BY

0620

SECTION 1

DL

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

1/9/98

04-087455

SNIU121333-0

Net NA 44092

SHIPPER

Bayer

CARRIER

Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit 6	40100	DCA

COMMENTS

C of A was failed

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

J. K. Kungler

07:50

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

Unloaded at T 0211

To unload at A later date

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

SV

✓

COMMENTS

DCA 99.17
H2O .02

SECTION 4

PLANT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

McBride

✓

PLANT WEIGHT

UNLOADING TIMES

NET

START TIME 0805

END TIME

COMMENTS



REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3041766

DATE: 01-16-98 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

West Helena Acct. Dept.

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

RECEIVED
JAN 23 1998
RECEIVED

1-12-98
11089

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041766 DATE: 01-16-98
FREIGHT: COLLECT DATE SHIPPED: 01-13-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	42,064.00	1.84	77,397.76

080081 06Y63646

BULK CONT: SNIU121059 GW: 50,000 TW: 7,936 NW: 42,064 (LBS)
ASSAYZ100.00

ENTERED

JAN 30 1998

W. HELENA

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041766	
P.O. #	REC RPT. #	INV. CD	INV DATE
87455		1	011698
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
2			
INVOICE AMT.		DISC ALLOWED	
77,397.76			
GL NUMBER	AMOUNT		WORK ORDER #
C153 5910	77,397.76		
DONE BY		DATE	APPROVED BY
DP			
		ENTERED BY	

77,397.76

LAST PAGE
ATION

**0068

IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

incorporation. Pittsburgh, PA 15205 000079480

RAW MATERIAL RECEIVING RECORD

11'89

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

04 20

RECEIVED BY

PL

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
11/12/78	04-087455	SN11121059-9	Net NA 42064

SHIPPER

B Rager

CARRIER

Iny 6 E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit 6	3020	DCA

COMMENTS

C of A was faxed

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
	5:00

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECTION
EP	✓		

COMMENTS

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECTION
	+		

PLANT WEIGHT

UNLOADING TIMES

NET	START TIME	END TIME
		4:30 PM

COMMENTS

**REMIT TO:**

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3041765

DATE: 01-16-98 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

West Helena Acct. Dept.

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

RECEIVED
JAN 23 1998
RECEIVED

1-12-98
11090

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041765 DATE: 01-16-98
FREIGHT: COLLECT DATE SHIPPED: 01-13-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	43,034.00	1.84	79,182.56

080081 06Y63645

BULK CONT: SNIU121058 GW: 50,000 TW: 6,966 NW: 43,034 (LBS)
ASSAY%100.00

ENTERED

JAN 30 1998

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041765	
P.O #	REC RPT #	INV CD	INV DATE
87455		1	011698
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
2			
INVOICE AMT		DISC ALLOWED	
79,182.56			
GL NUMBER		AMOUNT	WORK ORDER #
01535910		79,182.56	
DATE		APPROVED BY	ENTERED BY
1-28-98		DTN	

79,182.56

LAST PAGE
TION

**0067

IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
IF SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

orporation, Pittsburgh, PA 15205-9741

AB0000079480

RAW MATERIAL RECEIVING RECORD

No 11090

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0420

RECEIVED BY

DLV

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

1/12/98

04-087455

SN1U121058-3

Net NA 43034

SHIPPER

Bayan

CARRIER

Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit 6	3020	DCA

COMMENTS

C of A was filed

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

The oil

5:40

UNLOADED AT (tank number, unit, warehouse, etc.)

loaded at unit 6 with 100% moisture - 1st

COMMENTS

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

EP

✓

COMMENTS

SECTION 4

LAB SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

gmat

✓

PLANT WEIGHT

UNLOADING TIMES

NET

START TIME

END TIME

COMMENTS

Bayer 

REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3041770

DATE: 01-22-98 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

West Helena Acct. Dept.

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

RECEIVED
JAN 26 1998
RECEIVED

1-18-98
11130

INVOICE

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041770
FREIGHT: COLLECT

DATE: 01-22-98
DATE SHIPPED: 01-18-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	42,990.00	1.84	79,101.60

080081 06Y63647

BULK CONT: UTCU457009 GW: 50,000 TW: 7,010 NW: 42,990 (LBS)

ASSAY: 100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

ENTERED

JAN 31 1998

WEST HELENA

79,101.60

VENDOR #		INVOICE #	
2987		3041770	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	012298
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
3			
INVOICE AMT.		DISC ALLOWED	
79,101.60			
GL NUMBER	AMOUNT	WORK ORDER #	
01535910	79,101.60		
DATE		APPROVED BY	
1-21-98		031	
DONE BY		ENTERED BY	
KK			

LAST PAGE
ATION

**0051

IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
IF NO SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

corporation, Pittsburgh, PA 15205-8741
AB00000794

RAW MATERIAL RECEIVING RECORD

№ 11130

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
1222

RECEIVED BY
[Signature]

SECTION 1

DATE: 1-12-00 ORDER NO: 04-C8-455 UNIT ON TRUCK TO: UTC 445 TCC 9-6 Net N/A 42990

SHIPPER: [Signature] CARRIER: [Signature]

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit 6	3020	DCA

COMMENTS
C. O. H. in FAB

SECTION 2

RECIPIENT: [Signature] TIME SAMPLE/CERTIFICATE TAKEN TO LAB: 12:40

UNLOADED AT (tank number, unit, warehouse, etc.)
T-106211

COMMENTS

SECTION 3

LAB TECHNICIAN: PE ACCEPT: V REJECT: REASON FOR REJECTION:

COMMENTS
CLAPPA 700 700 700

SECTION 4

PLANT SUPERVISOR: ACCEPT: REJECT: REASON FOR REJECTION:

PLANT WEIGHT: NET UNLOADING TIMES: START TIME: END TIME:

COMMENTS



REMIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO:3041780

DATE: 01-23-98 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

1-24-98
11165
West Helena Acct. Dept.
RECEIVED
JAN 29 1998
RECEIVED

ENTERED
JAN 17 1998

INVOICE

PLEASE RETURN THE DUPLICATE INVOICE COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT.

PURCHASE ORDER #:04-087456
FOB:NEW ORLEANS, LA

ORDER INVOICE NO: 3041780 DATE: 01-23-98
FREIGHT: COLLECT DATE SHIPPED: 01-23-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	44,754.00	1.84	82,347.36

080081 06Y63652

BULK CONT:UTCU457000 GW: 50,000 TW: 5,246 NW: 44,754 (LBS)
ASSAY%100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041780	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	012398
TERMS CODE	DUE DATE	FRY BILL CD	SALES ORDER #
2			
INVOICE AMT.		DISC. ALLOWED	
82,347.36			
GL NUMBER	AMOUNT		WORK ORDER #
C153 5910	82,347.36		
DATE		APPROVED BY	
2-17-98		RK	

82,347.36

LAST PAGE
ATION

**0038

ED IN YOUR PURCHASE ORDER. YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Corporation, Pittsburgh, PA 15205-9741

AB0000079480

RAW MATERIAL RECEIVING RECORD

NE 11165

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE 07:20		SECTION 1		RECEIVED BY DL	
DATE 1/24/98	ORDER NO. 04-027455	CAR OR TRUCK NO. UTCU4570007-	DECLARED NET WT Net 44 753		
SHIPPER Bayer			CARRIER Trile E		
QUANTITY 1	CONTAINER S/C	DESTINATION unit 6	RAW MAT CODE # 3020	DESCRIPTION DCA	
COMMENTS C of A was flaked					
SECTION 2					
RECIPIENT M. W.		TIME SAMPLE/CERTIFICATE TAKEN TO LAB 9:00			
UNLOADED AT (tank number, unit, warehouse, etc.) unit 6 will be unloaded into T6210 & T6211					
COMMENTS no more to ship					
SECTION 3					
CAR TECHNICAL FD	LOADED ✓	REJECT	REASON FOR REJECTION		
COMMENTS					
SECTION 4					
PLANT WEIGHT NET	UNLOADING TIMES				
	START TIME		END TIME		
COMMENTS car was loaded in unit					

**RENIT TO:**

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3041778

DATE: 01-23-98 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
HWY 242 S
West Helena Acct. Dept. W HELENA AR 72390

RECEIVED
JAN 29 1998
RECEIVED

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041778 DATE: 01-23-98
FREIGHT: COLLECT DATE SHIPPED: 01-23-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	42,417.00	1.84	78,047.28

080081 06Y63651

BULK CONT: SNIU121127 GW: 50,000 TW: 7,583 NW: 42,417 (1.84)
ASSAY%100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

ENTERED
FEB 17 1998
WEST HELENA, AR

78,047.28

VENDOR #		INVOICE #	
2987		3041778	
P.O. #	REC RPT. #	INV CD	INV. DATE
87455		1	012398
TERMS CODE	DUE DATE	FRT BL CD	SALES ORDER #
3			
INVOICE AMT.		DISC ALLOWED	
78,047.28			
GL NUMBER	AMOUNT		WORK ORDER #
C153 5910	78,047.28		
DATE		APPROVED BY	
JAN 29 1998		[Signature]	

LAST PAGE
ATION

**0037

IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
IF SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Memphis, Pittsburgh, PA 15205 0000079480

RAW MATERIAL RECEIVING RECORD

NO 11169

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

1450

RECEIVED BY

B. McRae

SECTION 1

DATE	ORDER NO	CAR OR TRUCK NO	DECLARED WEIGHT
1-24-98	04-087455	Sea Cont # SMIU-1811876	Net 42416

SHIPPER

Bayar

CARRIER

Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/c	Unit #6	3020	DCA

COMMENTS

CofA in in Cedar. Lot. per T. Peppers

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
	1505

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

To be unloaded later

SECTION 3

UNRECEIVED	REJECT	REASON FOR REJECTION
TLP	X	

COMMENTS

SECTION 4

UNRECEIVED	REJECT	REASON FOR REJECTION

PLANT WEIGHT

UNLOADING TIMES

NET	START TIME	END TIME
	1-24-98 15:20	

COMMENTS



BAYER

RENIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO:3041773

DATE: 01-22-98 CO-21 DTN-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

1-18-98
11129

870-572-3795
Lisa Walker.

PURCHASE ORDER #04-087456
FOB:NEW ORLEANS, LA

ORDER INVOICE NO: 3041773 DATE: 01-22-98
FREIGHT: COLLECT DATE SHIPPED: 01-14-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	43,078.00	1.84	79,263.52

080081 06Y63649

BULK CONT:SNYU121279 GW: 50,000 TW: 6,922 NW: 43,078 (LBS)
ASSAYZ100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

ENTERED

FEB 26 1998

WEST HELENA

VENDOR #			INVOICE #		
2987			3041773		
P.O. #		REC RPT. #	INV. CD		INV. DATE
87455			1		012298
TERMS CODE		DUE DATE	FRT. BILL CD		SALES ORDER #
3					
INVOICE AMT.			DISC ALLOWED		
79,263.52					
GL NUMBER			AMOUNT		WORK ORDER #
C 153	5910		79,263.52		
DONE BY		DATE	APPROVED BY		ENTERED BY
RK		2-24-98	QW		

[illegible]

79,263.52

**ST PAGE
ON**

****0052**

**PURCHASE ORDER, YOUR ORDER IS ACCEPTED SUBJECT TO
AN ORDER IS ACCEPTED SUBJECT TO OUR REGULAR SCHED-
ULE PRICES.**

C2-24-39 02 46PM P000000079480

RAW MATERIAL RECEIVING RECORD

N^o 11129

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

12

RECEIVED BY

J. Williams

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	WEIGHTS (TARE)
	0007455	414-1279-7	Net 413018

SHIPPER

IL 140

CARRIER

Triplex

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	511	unit 6	3002	DCA

COMMENTS

C. O. H. in 4B

SECTION 2

RECIPIENT	TIME SAMPLE CERTIFICATE GIVEN TO CAR
<i>John J. H.</i>	

UNLOADED AT (tank number, unit, warehouse, etc.)

15

COMMENTS

10

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REWORK
<i>RF</i>			

COMMENTS

C. O. H. in 4B

SECTION 4

SHIFT SUPERVISOR	ACCEPT	REJECT	REWORK

PLANT WEIGHT

UNLOADING TIMES

NET	START TIME	END TIME

COMMENTS



REMIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

West Helena Acct. Dept.

RECEIVED
FEB 09 1998
RECEIVED

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE

BILL TO: 005761-001

DATE: 02-05-98 CO-21 DIV-10 DP-0012

SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP

HWY 242 S
W HELENA AR 72390 ENTERED

FEB 17 1998

WEST HELENA

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041784 DATE: 02-05-98
FREIGHT: COLLECT DATE SHIPPED: 01-28-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	41,888.00	1.84	77,073.92

080081 06Y63654

BULK CONT: SNIU121092 GW: 50,000 TW: 8,112 NW: 41,888 (LBS)

ASSAY: 100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041784	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	020598
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
2			
INVOICE AMT.		DISC. ALLOWED	
77,073.92			
GL NUMBER	AMOUNT		WORK ORDER #
0153 5910	77,073.92		
DATE		APPROVED BY	
ENTERED BY			

77,073.92

LAST PAGE
TION

**0051

IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
IF SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

AB0000079480

RAW MATERIAL RECEIVING RECORD

№ 11188

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0348

RECEIVED BY

[Signature]

SECTION 1

DATE

TIME

1-1-11

24-097455

11/11/11 15:21

Net 1500 41,887

SHIPPER

Burns

CARRIER

Truck 2

QUANTITY

CONTAINER

DESTINATION

RAW MAT CODE #

DESCRIPTION

1

616

3000

W...

COMMENTS

1200 A. in. FAR

SECTION 2

UNLOADED AT (tank number, etc. warehouse, etc.)

COMMENTS

SECTION 3

COMMENTS

PLANT WEIGHT

START TIME

NET

COMMENTS



REMIT TO:

BAYER CORPORATION
P.O. BOX 75862
CHARLOTTE, NC 28275-5862

RECEIVED
FEB 09 1998
RECEIVED

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3041783

DATE: 02-05-98 CO-21 DIV-10 DP-0012

SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041783 DATE: 02-05-98
FREIGHT: COLLECT DATE SHIPPED: 01-28-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	41,447.00	1.84	76,262.48

080081 06Y63653

BULK CONT: SNIU121015 GW: 50,000 TW: 8,553 NW: 41,447 (LBS)
ASSAY: 100.00

ENTERED

FEB 17 1998

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

WEST HELENA

VENDOR #		INVOICE #	
2987		3041783	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	020598
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
3			
INVOICE AMT		DISC. ALLOWED	
76,262.48			
GL NUMBER	AMOUNT		WORK ORDER #
C153 S910	76,262.48		
DONE BY		DATE	APPROVED BY
			ENTERED BY

76,262.48

LAST PAGE
TION

**0050

IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Bayer Corporation Pittsburgh PA 15205-0001 079480

RAW MATERIAL RECEIVING RECORD

N: 11191

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE
0800

RECEIVED BY
M. Lusk

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	DECLARED WEIGHT
1-29-98	C 4087455	SN10121715-6	Net 71/2

SHIPPER	CARRIER
Bayer	H. Lusk E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	SK	unit #6	3020	DCA

COMMENTS
Lab Has C.O.A.

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO LAB
<i>M. Lusk</i>	8:55

UNLOADED AT (tank number or warehouse)
unit 6

COMMENTS
cont. was be disposed & unloaded at 1st plant trip

SECTION 3

PLANT WEIGHT	START TIME	UNLOADING TIMES	END TIME
TLP	X		

COMMENTS

SECTION 4

PLANT WEIGHT	START TIME	UNLOADING TIMES	END TIME
<i>22</i>	X		

NET

COMMENTS



ILSCOT - GUIDROZ INTERNATIONAL

FMO NO 4054

MEMBER OF NATIONAL BROKERS & FORWARDERS
ASSOCIATION OF AMERICA

2815 DIVISION STREET
SUITE 202
METAIRIE, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898

TO CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

INVOICE # 41005

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE

OUR REFERENCE	DATE	YOUR REFERENCE
---------------	------	----------------

41005 01/24/98

BAYER TANKS FROM GERMANY

CARRIER	ON BOARD DATE	PORT OF LOADING	PORT OF DISCHARGE	ETA
---------	---------------	-----------------	-------------------	-----

/ /

ROTTERDAM

NOLA

/ /

BILL OF LADING NO.	COMMODITY
--------------------	-----------

PICK UP NOLA /TRUCK TO W.HELENA

RETURN TO NOLA EMPTY AND DISCHARGE TANK TO LEASING COMPANY

ENCLOSURES	ORIG.	COPY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING			AIR/OCEAN FREIGHT	
INS. CERTIFICATE			INLAND FREIGHT	
CONSULAR INVOICE			DRAYAGE/PORT SERVICES	
			INSURANCE	
			CONSULAR FEES	

ENTERED

JAN 30 1998

WEST HELENA

227.50

930.00

315.00

930.00

245.00

930.00

385.00

930.00

210.00

40.00

VENDOR #		INVOICE #	
12347		41005	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
		1	01/24/98
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
90			
INVOICE AMT.		DISC. ALLOWED	
5142.50			
GL NUMBER	AMOUNT	WORK ORDER #	
C 153 5920	5142 50		
DONE BY	DATE	APPROVED BY	ENTERED BY
KK	1-28-98	JK	

\$ 5142.50

YOU.

RELATIVE TO THESE CHARGES. THIS COMPANY HAS A POLICY AGAINST PAYMENT SOLICITATION, OR RECEIPT OF ANY REBATE DIRECTLY, OR INDIRECTLY, WHICH WOULD BE UNLAWFUL UNDER THE UNITED STATES SHIPPING ACT OF 1984.

AB0000079480



GILSCOT - GUIDROZ INTERNATIONAL

REC NO 4054

MEMBER OF NATIONAL BROKERS & FORWARDERS
ASSOCIATION OF AMERICA

2815 DIVISION STREET
SUITE 202
METAIRIE, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898

TO: CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE

INVOICE # 53080

OUR REFERENCE	DATE	YOUR REFERENCE		
53080	12/31/97	BAYER LEVERKUSEN TO SAJABABONY HUNGARY		
CARRIER	ON BOARD DATE	PORT OF LOADING	PORT OF DISCHARGE	ETA
	/ /			12/02/97
BILL OF LADING NO.		COMMODITY:		
		3,4DCA 4 TRUCKS LOADS 66 DRUMS EACH		

39600 LBS. APPROX EACH TO ARRIVE 12-2 18R WEEK DECEMBER 1997

ENCLOSURES	ORIG.	COPY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING			AIR/OCEAN FREIGHT	
INS. CERTIFICATE			INLAND FREIGHT	
CONSULAR INVOICE			DRAYAGE/PORT SERVICES	
COMMERCIAL INVOICE			INSURANCE	
			CONSULAR FEES	
			DOCUMENT EXPRESS	
			OTHER	

ENTERED

JAN 14 1998

WEST HELENA

6825.00

225.00

14.50

25.00

30.00

VENDOR #		INVOICE #	
12347		53080	
P.O. #	REG. RPT. #	INV. CD	INV. DATE
		1	123197
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
N			
INVOICE AMT.		DISC. ALLOWED	
7119.50			
GL NUMBER	AMOUNT	WORK ORDER #	
C1535920	7119.50		
DONE BY		DATE	
RK		1-13-98	
APPROVED BY		ENTERED BY	

\$ 7119.50

SAVE YOU.

SEND AND A TRUE COPY OF EACH PERTINENT DOCUMENT
IPT OF ANY REBATE DIRECTLY OR INDIRECTLY.

AB000007948



ILSCOT - GUIDROZ INTERNATIONAL

FMC NO 4054

MEMBER OF NATIONAL BROKERS & FORWARDERS
ASSOCIATION OF AMERICA

2815 DIVISION STREET
SUITE 202
METAIRIE, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898

TO: CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

INVOICE # 41004

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE

OUR REFERENCE	DATE	YOUR REFERENCE		
41004	01/07/98	BAYER TANKS FROM GERMANY		
CARRIER	ON BOARD DATE	PORT OF LOADING	PORT OF DISCHARGE	ETA
	/ /	ROTTERDAM	NOLA	/ /
BILL OF LADING NO.	COMMODITY			
	PICK UP NOLA /TRUCK W.HELENA			

RETURN TO NOLA EMPTY AND DISCHARGE TANK TO LEASING CO.

ENCLOSURES	ORIG.	COPY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING			AIR/OCEAN FREIGHT	
INS. CERTIFICATE			INLAND FREIGHT	
			DRAYAGE/PORT SERVICES	
			INSURANCE	
CONSULAR INVOICE			CONSULAR FEES	

ENTERED

JAN 14 1998

VOL 24.50

25.00

930.00

420.00

930.00

245.00

930.00

840.00

930.00

315.00

\$ 5579.50

WE HAVE YOU.

DCA
UNIT 6
OK
AC

VENDOR #		INVOICE #	
12347		41004	
P.O. #	REC. RPT. #	INV. CO	INV. DATE
		1	010798
TERMS CODE	DUE DATE	FRT. BILL CO	SALES ORDER #
N			
INVOICE AMT.		DISC. ALLOWED	
5579.50			
GL NUMBER	AMOUNT	WORK ORDER #	
0158 5920	5579.50		
DONE BY		DATE	
RK		1-13-98	
APPROVED BY		ENTERED BY	
JW			

Master Depot Products

UPON REQUEST, WE SHALL FURNISH A TRUE COPY OF EACH PERTINENT DOCUMENT RELATING TO THESE CHARGES. THIS COMPANY HAS A POLICY AGAINST PAYMENT SOLICITATION, OR RECEIPT OF ANY REBATE DIRECTLY, OR INDIRECTLY, WHICH WOULD BE UNLAWFUL UNDER THE UNITED STATES SHIPPING ACT OF 1924.

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AB000007948

ILSCOT - GUIDROZ INTERNATIONAL

FMC NO 4054

MEMBER OF NATIONAL BROKERS & FORWARDERS
ASSOCIATION OF AMERICA

2815 DIVISION STREET
SUITE 202
METAIRIE, LA 70002 USA
PHONE (504) 887-8887
FAX (504) 887-8888

TO: CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE

INVOICE # 41003

OUR REFERENCE	DATE	YOUR REFERENCE
41003	12/09/97	BAYER TANKS

CARRIER	ON BOARD DATE	PORT OF LOADING	PORT OF DISCHARGE	ETA
	/ /	ROTTERDAM	NOLA	/ /

BILL OF LADING NO.	COMMODITY:
	PICK UP NLA /WEST HELENA

RETURN TO NOLA EMPTY

ENCLOSURES	ORIG.	COPY	DESCRIPTION OF CHARGES
BILLS OF LADING			AIR/OCEAN FREIGHT
INS. CERTIFICATE			INLAND FREIGHT
CONSULAR INVOICE			DRAYAGE/PORT SERVICES
COMMERCIAL INVOICE			INSURANCE
			CONSULAR FEES
			DOCUMENT EXPRESS
			OTHER
			GILSCOT CHGS.

ENTERED
 JAN 14 1998
 14.00
 25.00 WEST HELENA

VENDOR #		INVOICE #	
12347		41003	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
		1	120997
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
N			
INVOICE AMT.		DISC. ALLOWED	
6509.00			
GL NUMBER	AMOUNT	WORK ORDER #	
01535920	6509.00		
DONE BY	DATE	APPROVED BY	ENTERED BY
RK	1-13-98	<i>[Signature]</i>	

930.00
420.00
930.00
560.00
930.00
315.00
930.00
315.00
930.00
210.00

\$ 6509.00

VE YOU.

SEND AND A TRUE COPY OF EACH PERTINENT DOCUMENT
OF ANY REBATE DIRECTLY OR INDIRECTLY.

DCA
 UN
 6
 OK
 36

Roster Paper Products

AB0000079480



ILSCOT - GUIDROZ INTERNATIONAL

FMC NO 4054

MEMBER OF NATIONAL BROKERS & FORWARDERS
ASSOCIATION OF AMERICA

2815 DIVISION STREET
SUITE 202
METAIRIE, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898

TO: CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE

INVOICE # 41002

OUR REFERENCE	DATE	YOUR REFERENCE		
41002	12/05/97	BAYER TANKS NOLA TO WEST HELENA		
CARRIER	ON BOARD DATE	PORT OF LOADING	PORT OF DISCHARGE	ETA
		ROTTERDAM	NOLA	11/03/97
BILL OF LADING NO.	COMMODITY			
	BAYER TANKS FROM NOLA TO W.HELENA/			

RETURN TRIP EMPTY

ENCLOSURES	ORIG.	COPY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING			AIR/OCEAN FREIGHT	
INS. CERTIFICATE			INLAND FREIGHT	
CONSULAR INVOICE			DRAYAGE/PORT SERVICES	
COMMERCIAL INVOICE			INSURANCE	
			CONSULAR FEES	
			DOCUMENT EXPRESS	
			OTHER	
BANK INSTRUCTION				

ENTERED
14.50
25.00
JAN 14 1998

VENDOR #		INVOICE #	
12347		41002	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
		1	120597
TERMS CODE	DUE DATE	FRY. BILL CD	SALES ORDER #
3			
INVOICE AMT.		DISC. ALLOWED	
4599.50			
GL NUMBER	AMOUNT	WORK ORDER #	
01535920	4599.50		
DATE		APPROVED BY	
1-13-98		9/12	
ENTERED BY			
RK			

930.00
175.00
930.00
175.00
930.00
245.00
930.00
245.00

HELENA

DCA UNIT 6
OK BC

\$ 4599.50

RVE YOU.

88ED AND A TRUE COPY OF EACH PERTINENT DOCUMENT
PT OF ANY REBATE DIRECTLY, OR INDIRECTLY,

AB0000079480

DEC-31-97 05:12 PM

GILSCOT CUSTOMER

5948978888

P-02



GILSCOT - GUIDROZ INTERNATIONAL

FMC NO 4154

MEMBER OF NATIONAL SHIPPERS & FORWARDERS
ASSOCIATION OF AMERICA2517 DIVISION STREET
SUITE 202

METairie, LA 70002 USA

PHONE (504) 887-8887

FAX (504) 887-8888

TO CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE

INVOICE #

41001

OUR REFERENCE	DATE	YOUR REFERENCE
41001	11/08/97	
BAYER CORP PITTSBURG PA.		
CARRIER	ON BOARD DATE	PORT OF LOADING
	/ /	ROTTERDAM
PORT OF DISCHARGE	ETA	
NOLA	11/03/97	
COMMODITY		
2 ISOTANKS UPTO WEST HELENA		
TO ISOTANKS BACK TO NOLA FROM WEST HELENA		

ENCLOSURES	QTY	COPY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING			AIR/OCEAN FREIGHT	
MIS. CERTIFICATE			INLAND FREIGHT	
CONSULAR INVOICE			DRAYAGE/PORT SERVICES	
COMMERCIAL INVOICE			INSURANCE	
BANK INSTRUCTION			CONSULAR FEES	
			DOCUMENT EXPRESS	
			OTHER	
			GILSCOT	

ENTERED
25.00 JAN 14 1998

VENDOR #		INVOICE #	
12347		41001	
P.O. #	REC. RPT. #	INV. CD	INV. DATE #
		1	110897
TERMS CODE	DUE DATE	FRY. BILL CD	SALES ORDER #
N			
INVOICE AMT.		DISC. ALLOWED	
416500			
GL NUMBER	AMOUNT	WORK ORDER #	
01535920	416500		
DONE BY		DATE	
RK		1-13-98	
APPROVED BY		ENTERED BY	
[Signature]			

1035.00
1035.00
1035.00
1035.00

1035.00

4165.00

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Baker Paper Products

AB0000079480

ILSCOT - GUIDROZ INTERNATIONAL

FMC NO 4054

**MEMBER OF NATIONAL BROKERS & FORWARDERS
ASSOCIATION OF AMERICA**

2815 DIVISION STREET
SUITE 202
METAIRIE, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898

10. CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

INVOICE # 53293

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE

OUR REFERENCE	DATE	YOUR REFERENCE		
53293	01/28/98	43585	AGRO SAN KIMYA SANAYI VE TIC AS	
CARRIER	ON BOARD DATE	PORT OF LOADING	PORT OF DISCHARGE	ETA
*CONTSHIP AMERICA-V CITE	01/21/98	NEW ORLEANS, LA/U.S.A	ISTANBUL/TURKEY	02/15/98
BILL OF LADING NO.	COMMODITY.			
TEMUNTAMR17E0223	1X20 FT CONTAINER TMMU2212931			

72X55 GAL DRUMS 3,4DICHLORANALINE 42624#

ENCLOSURES	ORIG.	COPY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING		3	AIR/OCEAN FREIGHT	2098.32
			INLAND FREIGHT	735.00
INS. CERTIFICATE		1	DRAYAGE/PORT SERVICES	
			INSURANCE	5.00
CONSULAR INVOICE			CONSULAR FEES	
			DOCUMENT EXPRESS	
COMMERCIAL INVOICE		1	OTHER	
BANK INSTRUCTION		1		
TRANSMITTAL LETTERS		1	PREP. CONSULAR DOCUMENTS	

46.00
JAN 31 1998
WEST HELENA

46.00
JAN 31 1998

WEST HELENA

[illegible]

80.00

25.00

26.00

7.50

7.50

\$ 3030.32

E YOU.

ED AND A TRUE COPY OF EACH PERTINENT DOCUMENT
OF ANY REBATE DIRECTLY OR INDIRECT AB000007948



FMC NO 4054

MEMBER OF NATIONAL BROKERS & FORWARDERS
ASSOCIATION OF AMERICA2815 DIVISION STREET
SUITE 202
METAIRIE, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898TO. CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE

INVOICE # 41008

OUR REFERENCE	DATE	YOUR REFERENCE		
41008	03/13/98	BAYER TANKS		
CARRIER	ON BOARD DATE	PORT OF LOADING	PORT OF DISCHARGE	ETA
	/ /	ROTTERDAM	NOLA	/ /
BILL OF LADING NO.	COMMODITY			
	BOB TAIL EMPTY UP TO WEST HELENA ,			

RETURN TWO EMPTY TANKS TO NOLA.

ENCLOSURES	ORIG.	COPY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING			AIR/OCEAN FREIGHT	ENTERED
INS. CERTIFICATE			INLAND FREIGHT	
CONSULAR INVOICE			DRAYAGE/PORT SERVICES	
COMMERCIAL INVOICE			INSURANCE	
BANK INSTRUCTION			CONSULAR FEES	
			DOCUMENT EXPRESS	
			OTHER	

MAR 26 1998
14.50
WEST HELENA

VENDOR #		INVOICE #	
12347		41008	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
		1	031398
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
N			
INVOICE AMT		DISC ALLOWED	
2389.50			
GL NUMBER	AMOUNT	WORK ORDER #	
C. 153 5920	2389.50		
DONE BY		DATE	APPROVED BY
RK		3-23-98	A
ENTERED BY			

930.00
245.00930.00
245.00

25.00

\$ 2389.50

IVE YOU.

USED AND A TRUE COPY OF EACH PERTINENT DOCUMENT
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AB0000079480



**Transamerica
Leasing Inc.
100 Manhattanville Road
Purchase, NY 10577-2135
Telephone 914 251-9000
Fax 914 697-2886**

PAGE: 1
AREA: AM REGION: 05

CEDAR CHEMICAL CORPORATION
P O. BOX 2749
W. HELENA, AR 72390

INVOICE DATE: FEBRUARY 28, 1998
INVOICE NUMBER: 9802102945

WIRE FUNDS TO : TRANSAMERICA LEASING INC
C/O CITIBANK NA NY NY
ACCT# 40523885/ ABA# 0210-00089
SEND CHECKS TO TRANSAMERICA LEASING INC
P.O. BOX 2377
CAROL STREAM, IL 60132-2377

PLEASE INCLUDE INVOICE NUMBER AND
CONTRACT CODE WITH YOUR REMITTANCE

CONTRACT: T11581
CUSTOMER: CCHXX

RECEIVED
MAR 09 1998

UNIT NUMBER	BOOKING/ REDELIVERY	#	AC	ACTIVITY LOCATION	ACTIVITY DATE	BILLING FROM	PERIOD TO	BILL DAYS	DAILY RATE	CHARGE	CHARGE DESC.
SPECIAL TANK											
ICSU 0292501	MS1155C		OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
ICSU 0292522	MS1155C		OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
ICSU 0292543	MS1155C		OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
ICSU 0292569	MS1155C		OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
ICSU 0292564	MS1155C		OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
ICSU 0292570	MS1155C		OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
ICSU 0292610	FR30815		OH	LE HAVRE	09/16/97	02/01/98	02/28/98	28	13.00	364.00	RENTAL
ICSU 0292625	MS1155C		OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
ICSU 0292646	MS1155C		OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
ICSU 0292667	MS1155C		OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
SUB TOTAL FOR SPECIAL TANK										3640.00	
HAZ-TANK											
TRLU 0270087	FR30228		OH	LE HAVRE	07/19/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TRLU 0270106	FR30228		OH	LE HAVRE	07/19/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TRLU 0271020	BE30275		OH	ANTWERP	10/28/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TRLU 0271139	BE30275		OH	ANTWERP	10/28/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TRLU 0272990	NL30239		OH	ROTTERDA	07/30/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TRLU 0273002	NL30239		OH	ROTTERDA	07/30/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TPTU 8100077	FR30785		OH	LE HAVRE	08/20/97	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TPTU 8100143	MS1154C		OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TPTU 8100307	FR30287		OH	LE HAVRE	11/19/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TPTU 8100333	FR30287		OH	LE HAVRE	11/19/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TPTU 8100349	FR30704		OH	LE HAVRE	06/19/97	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TPTU 8100502	MS1154C		OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
TPTU 8100523	MS1154C		OH	CONVERSI	06/01/96	02/01/98	02/28/98	28	13.00	364.00	RENTAL
								28	13.00	364.00	RENTAL

[illegible]

ENTERED

MAR 26 1998

US	\$8,736.00
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INQUIRIES: 708-449-7989

AB0000079480

CEDAR CHEMICAL CORPORATION
Journal Voucher

[illegible]

13

AB0000079620

K D Feddersen & Co

Load 10 716826

	Date	Inv #	Kgs	Conv	Lbs	US\$	Per # Price
Feddersen Shipments	1/5/98	215201	24,240	2.2046 2.2046	53,440 0	140,592.00	2.631
Inland Freight	1/5/98	47004 Feddersen				1,690.00	0.032
Inland Freight	11/6/97	52901 Gilscot				1,905.96	0.036
Inland Freight	11/6/97	52826 Gilscot				1,434.15	0.027
Ocean Freight							0.000
Inland Freight							0.000
Duty							0.000
Duty							0.000
Inland Freight							0.000
Accrued Frt & Duty							0.000

Cedar DCA Used	Balance of Inventory			0.00	#DIV/0!
1/31/98 (24,240 kg*2.2046/1.28) =		41,750			

Ck Total	41,750
----------	--------

Actual Conversion Rate	#DIV/0!
Target	1.280

Total Cost delivered to Drexal	145,622.11	2.725
--------------------------------	------------	-------

Note: The Duty may be refunded if and when Congress passes budget bill.

Invoicing to Drexal

	Date	Inv #	Order #	Lbs	US\$	Per # Price
Customer Invoice						#DIV/0!
Total Sold				0	0.00	#DIV/0!
Total Profit (Loss) from Transaction					(145,622.11)	#DIV/0!
Accounting:			\$ Dollars	Unit Cst		
C157-5910			140,592.00			
C157-5920			5,030.11			
Total		53,440	145,622.11	2.725		

DCA Shipped to Feddersen:

Date	B/L #	Container #	Drums	Net Per Drum	Net Wt	
12/2/97	Bayer	Inv #3088975	66	551	36,366	
12/2/97	Bayer	Inv #3088966	66	551	36,366	
12/2/97	Bayer	Inv #3088954	66	551	36,366	
12/2/97	Bayer	Inv #3088959	66	551	36,366	145,464
			264	550	145,464	145,464

DCA Used Load 10**41,750****Balance of DCA Inventory at Hungary****103,714****Diuron Received:****TRLU201089-5****TRLU215252-4**

Bags	Diuron Shp'd	DCA Used
404	26,720	20,875
404	26,720	20,875

Total Received**53,440 41,750**

K. D. FEDDERSEN & CO. UEBERSEEGESELLSCHAFT



K. D. Feddersen & Co. Ueberseesges. - P.O.B. 10 10 20 - D-20007 Hamburg

Cedar Chemical Corp.
24th. Floor, 5100 Poplar Ave

38137 Memphis/TN.
U.S.A.

Supplies
Supply
No. 01-1000 City
Hamburg
Address
Address
Address
Address
Address
Address
Address
Address
Address
Address

P.O.B. 10 10 20
D-20007 Hamburg
Telefon 040/2 35 07-01
Telefax 040/2 35 07-490
Telex *2 163 481 hdd d
Büro/Office
Gartenstr. 11 A
D-20007 Hamburg

C1575910
ENTERED

FEB 27 1998

WEST HELENA

INVOICE 215201

Suppliers Code : 414371
Contract-No : 716878
Date of invoice: 05.01.98
Client No : 23024
Your Reference : -
Our Reference : KBA-GSC
Telephone : 040/23507-540
Page : 1

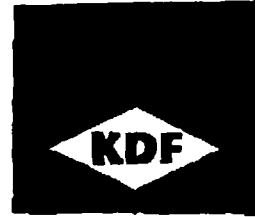
SHIPPED ON JANUARY 3, 1998 ON MS "TAYSON LYRES"
Terms of Delivery : C & F NEW ORLEANS, INCL. PACKING
Packing : 30 KGS MULTIPLY PAPER/PE BAGS + PP OVERRAGE
Payment : 30 DAYS DATE OF B/L

Quantity P/U	Product Description	USD /P/U	Total /USD
24.240,00 kg	DIURON TECHNICAL	6.00 /kg	140.592,00

VENDOR #		INVOICE #	
10638		215201	
P.O. #	REC. RPT. #	INV. CO	INV. DATE
		1	010598
TERMS CODE	DUE DATE	FRY. BILL CO	SALES ORDER #
3			
INVOICE AMT.		DISC. ALLOWED	
140.592,00			
GL NUMBER	AMOUNT		WORK ORDER #
C1575910	140.592,00		
			952
DONE BY	DATE	APPROVED BY	ENTERED BY

:USD 140.592,00

K. D. FEDDERSEN & CO. UEBERSEEGESELLSCHAFT



K. D. Feddersen & Co. Ueberseeges. - R.O.B. 10 10 20 - D-20007 Hamburg

Cedar Chemical Corp.
24th. Floor, 5100 Poplar Ave

38137 Memphis/TN.
U.S.A.

Bangkok
Beijing
Ho Chi Minh City
Hongkong
Kuala Lumpur
London
Lyons
Manila
Sao Paulo
Shanghai
Tokyo

R.O.B. 10 10 20
D-20007 Hamburg
Telefon 040/2 35 07-01
Telefax 040/2 35 07-450
Telex *2 163 481 kdf d
Büro/Office
Gartenstr. 11 A
D-20097 Hamburg

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FROM mph*

INVOICE 215201

Suppliers Code : 414371
Contract-No : 716826
Date of invoice: 08.01.98
Client No : 23024
Your Reference : -
Our Reference : KBA-GSC
Telephone : 040/23507-540
Page : 1

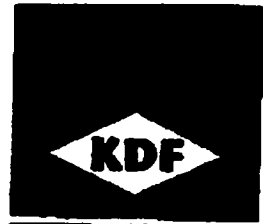
SHIPPED ON JANUARY 3, 1998 ON MS "TAYSON LYKES"
Terms of Delivery : C & F NEW ORLEANS, INCL. PACKING
Packing : 30 KGS MULTIPLY PAPER/PE BAGS + PP OVERRAGE
Payment : 30 DAYS DATE OF B/L

Quantity P/U	Product Description	USD /P/U	Total /USD
24.240,00 kg	DIURON TECHNICAL MIN. 96 %	5,80 /kg	140.592,00
C & F NEW ORLEANS, INCL. PACKING		Total :USD	140.592,00

K.D.FEDDERSEN & CO.
UEBERSEEGERES. MBH

*A.
Lhola*

K. D. FEDDERSEN & CO. UEBERSEEGESELLSCHAFT



K. D. Feddersen & Co. Ueberseege. - P.O.B. 10 10 20 - D-20097 Hamburg

Cedar Chemical Corp.
24th. Floor, 5100 Poplar Ave

38137 Memphis/TN.
U.S.A.

Singapore
Bangkok
Ho Chi Minh City
Hong Kong
London
Atlanta
Amsterdam
Los Angeles
Miami
San Paulo
Shanghai
Tokyo

P.O.B. 10 10 20
D-20097 Hamburg

Telefon 040/2 35 07-01
Telefax 040/2 35 07-480
Telex *2163 481 kdf d

Branch/Office
Gartenstr. 11 A
D-20097 Hamburg

C157-5920

Debit-Note

Number : 47004
Date : 05.01.98 / GSC
Client No : 23024
Contract-No : 716826
Page : 1

Contract-No : 716826-1
Invoice No : 215201

FREIGHT CONTRIBUTION TO SHIPMENT ON
JANUARY 4, 1998 ON MS "TAYSON LYKES"
FROM HAMBURG TO NEW ORLEANS

USD

ENTERED

FEB 27 1998

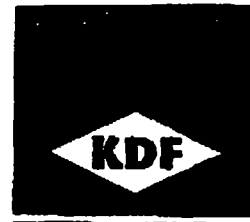
WEST DELTA 1.690,00

:USD 1.690,00

:USD 1.690,00

VENDOR #		INVOICE #	
10638		47004	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
		1	010598
TERMS CODE	DUE DATE	FRY. BILL CD	SALES ORDER #
3			
INVOICE AMT		DISC. ALLOWED	
1690.00			
GL NUMBER	AMOUNT	WORK ORDER #	
C157 5920	1690.00		
DATE BY	DATE	APPROVED BY	ENTERED BY

K. D. FEDDERSEN & CO. UEBERSEEGESELLSCHAFT



K. D. Feddersen & Co. Uebersees. - P.O.B. 10 10 20 - D-20007 Hamburg

Bangkok
Beijing
Ho Chi Minh City
Hongkong
Jakarta
Kuala Lumpur
Lagos
Manila
Sao Paulo
Shanghai
Tientsin

P.O.B. 10 10 20
D-20007 Hamburg
Telefon 040/2 35 07-01
Telefax 040/2 35 07-450
Telex *2163 481 kdfu d
Büro/Office
Gartenstr. 11 A
D-20097 Hamburg

Cedar Chemical Corp.
24th Floor, 5100 Poplar Ave
38137 Memphis/TN.
U.S.A.

*COAES FIXED
FROM MANS*

Debit-Note

Number : 47004
Date : 05.01.98 / GSC
Client No : 23024
Contract-No : 716826
Page : 1

Contract-No : 716826-1
Invoice No : 215201

USD 1.690,00

FREIGHT CONTRIBUTION TO SHIPMENT ON
JANUARY 4, 1998 ON MS "TAYSON LYKES"
FROM HAMBURG TO NEW ORLEANS

Amt. : USD 1.690,00

Amt. : USD	1.690,00	0,00% VAT	0,00	Total	:USD	1.690,00
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K.D.FEDDERSEN & CO.
UEBERSEEGER. MEH

1. A.

Schole



GILSCOT - GUIDROZ INTERNATIONAL

FMC NO 4054

MEMBER OF NATIONAL FORWARDERS
ASSOCIATION OF AMERICA2815 DIVISION STREET
SUITE 202
METairie, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898TO CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

INVOICE #

52901

WEST HELSNA, AR 72390

ATTN: ACTS RECEIVABLE

OUR REFERENCE	DATE	YOUR REFERENCE
52901	11/06/97	213780/3 ED PEDDERSEN
CARRIER	ONBOARD DATE	PORT OF LOADING
"ALMERIA LYKES"	09/19/97	HAMBURG
		PORT OF DISCHARGE
		NEW ORLEANS
ETA		10/20/97
BILL OF LADING NO.	COMMODITY	
	1X40 LYKU2099395, 1X20LYTU3029567	

DIURON 21210 KGS AND 7484.1 KGS

ENCLOSURES	QTY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING	1	AIR/OCEAN FREIGHT	
WHL CERTIFICATE		INLAND FREIGHT	
CONSULAR INVOICE		DRAYAGE/PORT SERVICES	
COMMERCIAL INVOICE	1	INSURANCE	
BANK INSTRUCTION		CONSULAR FEES	
		DOCUMENT EXPRESS	
		OTHER	
		TELE HAND CHARGE	

240.00 ENTERED

JAN 14 1998

974.72

219.58

130.69

225.00

80.00

10.00

25.00

VENDOR #		INVOICE #	
12347		52901	
P.O. #	REC. RPT. #	INV. CO	INV. DATE
		1	11/06/97
TERMS CODE	DUE DATE	FRT. BILL CO	SALES ORDER #
N			
INVOICE AMT.		DISC. ALLOWED	
1905.96			
GL NUMBER	AMOUNT	WORK ORDER #	
C1575920	1905.96		
DONE BY		DATE	
TK		1-13-98	
APPROVED BY		ENTERED BY	
gTW			

1905.96

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Baker Paper Products

SECRET

ILSCOT - GUIDROZ INTERNATIONAL

ENC NO. 4034

**FEDERAL BUREAU OF INVESTIGATION
U. S. DEPARTMENT OF JUSTICE**

2017-2018 61321

ELITE 202

METAIRE LA 70002 US

PHONE (604) 807-4887

FAX (504) 887-8898

INVOICE #

52826

WEST HILLS, AR 72390

ATTN: ACTS RECEIVABLE

52026 11/06/97 714.294 KD PEDDERSEN & CO.

"GENEVIÈVE LYERS"	09/19/97	HAMBURG	NEW ORLEANS	10/13/97
-------------------	----------	---------	-------------	----------

21530 KGS DIURON TECH.

240100
ENTERED
JAN 14 1998
541.06
WEST HELENA

164.61
97.98

225.00
80.00
14.50
45.00
26.00

3424.15

Diurnal
OK
BC

**A TRUE COPY OF EACH PERTINENT DOCUMENT
BEING FORWARDED TO THE PRESIDENT**

Feb Load #4

PURCHASED & RESOLD TO FEDDERSEN ORDERth

AB0000079443

Bayer - DCA**Load 4**

	Date	Inv #	RR#	Drms	Net	Lbs	US\$	Per #	Price
DCA Purchase	2/6/98	3125016				36,368	59,822.07		1.645
DCA Purchase	2/6/98	3125017				36,368	59,822.07		1.645
DCA Purchase	2/6/98	3125018				36,368	59,822.07		1.645
DCA Purchase	2/6/98	3125019				36,368	59,822.07		1.645
						145,464			
Ocean Freight									0.000
Duty									0.000
Inland Freight									0.000
Inland Freight									0.000
Total Cost delivered to Hungary							239,288.28		1.645

Accounting:		\$ Dollars	Unit Cst
C153-5910		239,288.28	
C153-5920		0.00	
Total	145,464	239,288.28	1.645



West Helena Acc. Dept.

REMIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

RECEIVED
FEB 17 1998
RECEIVED

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE

BILL TO: 005761-001

NO: 3125016

DATE: 02-06-98 CO-21 DIV-10 DP-0012

EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP

P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP

C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY

61

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT.

PURCHASE ORDER #: 04-108029

FOB: LEVERKUSEN, GE

ORDER INVOICE NO: 3125016

DATE: 02-06-98

FREIGHT: COLLECT

DATE SHIPPED: 01-30-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07

080081 06Y65388 66 X 551.00 LB DRUM (1751)

SPECIAL PRICING APPLIES

06Y65388

TERMS AND CONDITIONS FOR EACH ITEM

VENDOR #		INVOICE #	
2987		3125016	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
108029		1	020698
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
2			
INVOICE AMT.		DISC. ALLOWED	
59,822.07			
GL NUMBER	AMOUNT		WORK ORDER #
01538910	39,822.07		
DONE BY		DATE	APPROVED BY
			ENTERED BY

59,822.07

LAST PAGE
CORPORATION

**0024

IF IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
IF SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

AB0000079443

REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3125017 DATE: 02-06-98 CO-21 DIV-10 DP-0012
EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

West Helena Acct Dept.
RECEIVED
FEB 17 1998
RECEIVED

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY 61

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT.

PURCHASE ORDER #: 04-108029
FOB: LEVERKUSEN, GE

ORDER INVOICE NO: 3125017 DATE: 02-06-98
FREIGHT: COLLECT - DATE SHIPPED: 02-03-98--

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65389	66 X 551.00 LB DRUM (1751)			

SPECIAL PRICING APPLIES

06Y65389

TERMS AND CONDITIONS FOR EACH ITEM

VENDOR #		INVOICE #	
2987		3125017	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
108029		1	020698
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
2			
INVOICE AMT.		DISC. ALLOWED	
59,822.07			
GL NUMBER	AMOUNT	WORK ORDER #	
01535910	59,822.07		
DATE		APPROVED BY	
2-29-98		[Signature]	
ENTERED BY			
RK			

59,822.07

LAST PAGE
CORPORATION

##0025

IF IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Corporation, Pittsburgh, PA 15205-9741

AB0000079443

REMIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE

BILL TO: 005761-001

NO: 3125018

DATE: 02-06-98 CO-21 DIV-10 DP-0012

EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

West Helena Acc't Dep:

RECEIVED
FEB 17 1998
RECEIVED

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY 61

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT.

PURCHASE ORDER #: 04-108029
FOB: LEVERKUSEN, GE

ORDER INVOICE NO: 3125018 **DATE: 02-06-98**
FREIGHT: COLLECT **DATE SHIPPED: 02-03-98**

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65390	66 X 551.00 LB DRUM (1751)			

SPECIAL PRICING APPLIES

06Y65390

ITEM CODE

VENDOR #		INVOICE #	
2987		3125018	
P.O. #	REC. RPT. #	INV. CO	INV. DATE
108029		1	020698
TERMS CODE	DUE DATE	FRY. BILL CO	SALES ORDER #
2			
INVOICE AMT.		DISC. ALLOWED	
59,822.07			
GL NUMBER	AMOUNT		WORK ORDER #
C 153 3910	59,822.07		
DONE BY		DATE	APPROVED BY
24		2 06 98	CTN
		ENTERED BY	

59,822.07

LAST PAGE
INFORMATION

****0026**

IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
O SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Corporation Pittsburgh PA 15205-0741

AB0000079443

Bayer 

FEB 17 1998

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

NO: 3125019 DATE: 02-06-98 CO-21 DIV-10 DP-0012
EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY **61**

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT.

ORDER INVOICE NO: 3125019 DATE: 02-06-98
FREIGHT: COLLECT DATE SHIPPED: 02-04-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65391	66 X 551.00 LB DRUM (1751)			

SPECIAL PRICING APPLIES

06Y65391

TERMS AND CONDITIONS FOR EACH ITEM

VENDOR #		INVOICE #	
	2987		3125019
P.O. #		INV. CD	
108029		/	
TERMS CODE	DUE DATE	FRT. BILL CD	Sales ORDER #
3			020698
INVOICE AMT.	DISC. ALLOWED		
\$9,822.07			
GL NUMBER	AMOUNT		WORK ORDER #
C 153 5910	\$9,822.07		
DONE BY	DATE	APPROVED BY	ENTERED BY
RK	2-22-08	[Signature]	

59,822.07

**LAST PAGE
REPRODUCTION**

★ ★ 0027

IF IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Information Pittsburgh PA 15205-9741

AB0000079443

FEB LOAD #3

PURCHASED & RESOLD TO FENDBERSEN ORDER # 42607

AB0000079449

Bayer - DCA

Load 3

	Date	Inv #	RR#	Drms	Net	Lbs	US\$	Per # Price
DCA Purchase	1/9/98	3125015				36,366	59,822.07	1.645
DCA Purchase	1/9/98	3125014				36,366	59,822.07	1.645
DCA Purchase	1/9/98	3125009				36,366	59,822.07	1.645
DCA Purchase	1/9/98	3125012				36,366	59,822.07	1.645
						145,464		
Ocean Freight								0.000
Duty	2/6/98	53342					6,924.50	0.048
Inland Freight	2/6/98	41007					5,020.00	0.035
Inland Freight	2/6/98	41006					4,929.50	#DIV/0!
Total Cost delivered to Hungary Sold to Feddersen							256,162.28	1.761

Accounting:		\$ Dollars	Unit Cst
C153-5910		239,288.28	
C153-5920		16,874.00	
Total	145,464	256,162.28	1.761

Note: Resold to Feddersen Order #42607

REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3125015 DATE: 01-09-98 CO-21 DIV-10 DP-0012
EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY 61

DUPLICATE INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
 REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
 ACCOUNT

PURCHASE ORDER #: 04-108029
FOB: LEVERKUSEN, GE

ORDER INVOICE NO: 3125015 DATE: 01-09-98
FREIGHT: COLLECT DATE SHIPPED: 01-09-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65387	66 X 551.00 LB DRUM (1751)			

SPECIAL PRICING APPLIES

06Y65387

ITEM	CODE	TERMS AND CONDITIONS FOR EACH ITEM
	(0005)	NET 30 DAYS

TOTAL AMOUNT FOR THIS ORDER INVOICE 59,822.07

***** EXPORT SHIPMENT *****

R36-D01-T001-P --- CO-21 DIV-10 009404 PAGE 1 LAST PAGE**
666 CUSTOMER REQUEST CARR *20CUS@ 0175 0175 BAYER CORPORATION

****0035**

TERMS AND CONDITIONS: NOTWITHSTANDING ANY CONTRARY OR INCONSISTENT CONDITIONS THAT MAY BE EMBODIED IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED SUBJECT TO THE PRICES, TERMS AND CONDITIONS OF THE MUTUALLY EXECUTED CONTRACT BETWEEN US. OR, IF NO SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED SUBJECT TO OUR REGULAR SCHEDULED PRICE AND TERMS IN EFFECT AT TIME OF SHIPMENT AND SUBJECT TO THE TERMS AND CONDITIONS PRINTED ON THE REVERSE HEREOF

CUSTOMER'S INVOICE

Bayer Corporation, Pittsburgh, PA 15205-0001

PLEASE INDICATE BELOW ANY COMMENTS OR QUESTIONS YOU HAVE REGARDING BILLING AND/OR PRODUCT DATA SHOWN ON THE INVOICE.

CONDITIONS

1. Seller reserves the right, among other remedies, either to cancel this contract or suspend further deliveries under it in the event Buyer fails to pay for any one shipment when same becomes due. Should Buyer's financial responsibility become unsatisfactory to Seller, cash payments or satisfactory security may be required by Seller.

2. Unless otherwise agreed, it is understood the product herein specified is for consumption in the United States of America.

3. Seller shall not be required to deliver in any month more than monthly quantity specified above, or if no monthly quantity specified, more than the pro rata amount of the maximum quantity specified.

4. Seller shall not be bound to tender delivery of any quantities for which Buyer has not given shipping instructions.

5. Deliveries may be suspended by either party in case of act of God, war, riots, fire, explosion, flood, strike, lockout, injunction, inability to obtain fuel, power, raw materials, labor, containers, or transportation facilities, accident, breakage of machinery or apparatus, national defense requirements, or other causes beyond the control of either party, preventing the manufacture, shipment, acceptance or consumption of a shipment of the product, or of a material upon which the manufacture of the product of this contract is dependent. Such deliveries so suspended shall be cancelled without liability, but the contract shall otherwise remain unaffected. Seller may during any period of shortage due to any of said causes, allocate its supply of such raw materials or goods among itself, for its own manufacturing uses, and its customers in such manner as Seller deems practicable.

6. In case of bulk carload, tank truck or tank car shipments, shipper's weights, certified to by sworn weighmaster, shall govern.

7. Seller warrants title and that all goods sold hereunder shall conform to Seller's specifications, if any. Subject to the preceding sentence and except as otherwise stated herein, SELLER MAKES NO WARRANTY EXTENDING BEYOND THE DESCRIPTION OF THE GOODS ON THE FACE HEREOF. THERE ARE NO OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, AS TO MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER MATTER WITH RESPECT TO THE GOODS. SELLER SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES. Claims on account of weight, quality, loss of or damage to the product shall be made in writing as promptly as possible. Seller's liability for damages shall in no event exceed the purchase price of the particular delivery with respect to which damages are claimed. Unless otherwise stated, Seller's standard specifications for quality shall govern. Without limiting the generality of the foregoing, Buyer expressly assumes all risk of patent infringement by reason of its use of material provided hereunder in combination with other material or in the operation of any process.

8. Any tax or governmental charge or increase in same hereafter becoming effective increasing the cost to Seller of producing, selling or delivering the product or of procuring materials used therein, and any tax now in effect or increase in same payable by Seller because of this sale, such as Sales Tax, Use Tax, Retailer's Occupational Tax, Gross Receipts Tax, may, at Seller's option, be added to the price herein specified.

9. The price, point of delivery and terms of payment herein specified may be revised by Seller to reflect Seller's list price, point of delivery and terms of payment in effect at the time of shipment.

10. If Seller desires to revise the price, point of delivery or terms of payment pursuant to the preceding paragraph, but is restricted to any extent against so doing by reason of any law, decree, order or regulation of any government, or if the price, point of delivery or terms of payment then in effect is altered by reasons of any law, decree, order or regulation of any government, Seller shall have the right to terminate this contract.

11. Any increase in freight rates paid by Seller on shipments covered by this contract, may, at Seller's option, be added to the price of the material shipped under this contract.

12. Where shipment requires use by Seller of carboys, drums, barrels, or other returnable containers, title to such containers shall remain in Seller and a deposit in the amount required by Seller must be made at the time the product is paid for to insure the return of the container to point of shipment. Such containers must be kept in good condition and may not be used for any material other than that shipped therein, and must be returned within sixty (60) days from date of shipment. I.C.C. regulations require that empty drums must have filling and vent holes properly closed and empty carboys must be thoroughly (completely) drained. On such containers being so returned in good condition, a refund of the deposit will be made.

13. This contract shall bind the successors and assignees of the parties hereto at the option of Seller.

14. This document is not an Expression of Acceptance or a Confirmation document as contemplated in Section 2-207 of the Uniform Commercial Code. The acceptance of any order entered by Buyer is expressly conditioned on Buyer's assent to any additional or conflicting terms contained herein.

15. It is mutually agreed by and between the parties hereto that this contract shall be construed under the laws of the state mentioned in the address of the Buyer division listed on the front hereof.

16. These goods were produced in compliance with all applicable requirements of sections 6, 7 and 12 of the Fair Labor Standards Act, as amended, and of regulations and orders of the United States Department of Labor issued under Section 14 thereof.



REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3125014 DATE: 01-09-98 CO-21 DIV-10 DP-0012
EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY 61

DUPLICATE INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-108029
FOB: LEVERKUSEN, GE

ORDER INVOICE NO: 3125014 DATE: 01-09-98
FREIGHT: COLLECT DATE SHIPPED: 01-09-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65386	66 X 551.00 LB DRUM (1751)			

SPECIAL PRICING APPLIES

06Y65386

ITEM	CODE	TERMS AND CONDITIONS FOR EACH ITEM
	(0005)	NET 30 DAYS

TOTAL AMOUNT FOR THIS ORDER INVOICE 59,822.07

* * * EXPORT SHIPMENT * * *

R36-D01-T001-P ---*** CO-21 DIV-10 009404 PAGE 1 LAST PAGE
666 CUSTOMER REQUEST CARR *20CUSE 0175 0175 BAYER CORPORATION

**0034

TERMS AND CONDITIONS: NOTWITHSTANDING ANY CONTRARY OR INCONSISTENT CONDITIONS THAT MAY BE EMBODIED IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
SUBJECT TO THE PRICES, TERMS AND CONDITIONS OF THE MUTUALLY EXECUTED CONTRACT BETWEEN US, OR, IF NO SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
SUBJECT TO OUR REGULAR SCHEDULED PRICE AND TERMS IN EFFECT AT TIME OF SHIPMENT AND SUBJECT TO THE TERMS AND CONDITIONS PRINTED ON THE REVERSE
HEREOF

MB258
Rev. 1/95

CUSTOMER'S INVOICE

Bayer Corporation, Pittsburgh, PA 15205-0711

FORM 1231A

AB0000079446

PLEASE INDICATE BELOW ANY COMMENTS OR QUESTIONS YOU HAVE REGARDING BILLING AND/OR PRODUCT DATA SHOWN ON THE INVOICE.

CONDITIONS

1. Seller reserves the right, among other remedies, either to cancel this contract or suspend further deliveries under it in the event Buyer fails to pay for any one shipment when same becomes due. Should Buyer's financial responsibility become unsatisfactory to Seller, cash payments or satisfactory security may be required by Seller.

2. Unless otherwise agreed, it is understood the product herein specified is for consumption in the United States of America.

3. Seller shall not be required to deliver in any month more than monthly quantity specified above, or if no monthly quantity specified, more than the pro rata amount of the maximum quantity specified.

4. Seller shall not be bound to tender delivery of any quantities for which Buyer has not given shipping instructions.

5. Deliveries may be suspended by either party in case of act of God, war, riots, fire, explosion, flood, strike, lockout, injunction, inability to obtain fuel, power, raw materials, labor, containers, or transportation facilities, accident, breakage of machinery or apparatus, national defense requirements, or other causes beyond the control of either party, preventing the manufacture, shipment, acceptance or consumption of a shipment of the product, or of a material upon which the manufacture of the product of this contract is dependent. Such deliveries so suspended shall be cancelled without liability, but the contract shall otherwise remain unaffected. Seller may during any period of shortage due to any of said causes, allocate its supply of such raw materials or goods among itself, for its own manufacturing uses, and its customers in such manner as Seller deems practicable.

6. In case of bulk cartload, tank truck or tank car shipments, shipper's weights, certified to by sworn weighmaster, shall govern.

7. Seller warrants title and that all goods sold hereunder shall conform to Seller's specifications, if any. Subject to the preceding sentence and except as otherwise stated herein, SELLER MAKES NO WARRANTY EXTENDING BEYOND THE DESCRIPTION OF THE GOODS ON THE FACE HEREOF. THERE ARE NO OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, AS TO MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER MATTER WITH RESPECT TO THE GOODS. SELLER SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES. Claims on account of weight, quality, loss of or damage to the product shall be made in writing as promptly as possible. Seller's liability for damages shall in no event exceed the purchase price of the particular delivery with respect to which damages are claimed. Unless otherwise stated, Seller's standard specifications for quality shall govern. Without limiting the generality of the foregoing, Buyer expressly assumes all risk of patent infringement by reason of its use of material provided hereunder in combination with other material or in the operation of any process.

8. Any tax or governmental charge or increase in same hereafter becoming effective increasing the cost to Seller of producing, selling or delivering the product or of procuring materials used therein, and any tax now in effect or increase in same payable by Seller because of this sale, such as Sales Tax, Use Tax, Retailer's Occupational Tax, Gross Receipts Tax, may, at Seller's option, be added to the price herein specified.

9. The price, point of delivery and terms of payment herein specified may be revised by Seller to reflect Seller's list price, point of delivery and terms of payment in effect at the time of shipment.

10. If Seller desires to revise the price, point of delivery or terms of payment pursuant to the preceding paragraph, but is restricted to any extent against so doing by reason of any law, decree, order or regulation of any government, or if the price, point of delivery or terms of payment then in effect is altered by reasons of any law, decree, order or regulation of any government, Seller shall have the right to terminate this contract.

11. Any increase in freight rates paid by Seller on shipments covered by this contract, may, at Seller's option, be added to the price of the material shipped under this contract.

12. Where shipment requires use by Seller of carboys, drums, barrels, or other returnable containers, title to such containers shall remain in Seller and a deposit in the amount required by Seller must be made at the time the product is paid for to insure the return of the container to point of shipment. Such containers must be kept in good condition and may not be used for any material other than that shipped therein, and must be returned within sixty (60) days from date of shipment. L.C.C. regulations require that empty drums must have filling and vent holes properly closed and empty carboys must be thoroughly (completely) drained. On such containers being so returned in good condition, a refund of the deposit will be made.

13. This contract shall bind the successors and assignees of the parties hereto at the option of Seller.

14. This document is not an Expression of Acceptance or a Confirmation document as contemplated in Section 2-207 of the Uniform Commercial Code. The acceptance of any order entered by Buyer is expressly conditioned on Buyer's assent to any additional or conflicting terms contained herein.

15. It is mutually agreed by and between the parties hereto that this contract shall be construed under the laws of the state mentioned in the address of the Buyer division listed on the front hereof.

16. These goods were produced in compliance with all applicable requirements of sections 6, 7 and 12 of the Fair Labor Standards Act, as amended, and of regulations and orders of the United States Department of Labor issued under Section 14 thereof.



REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3125009 DATE: 01-09-98 CO-21 DIV-10 DP-0012
EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY 61

DUPLICATE INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-108029
FOB: LEVERKUSEN, GE

ORDER INVOICE NO: 3125009 DATE: 01-09-98
FREIGHT: COLLECT DATE SHIPPED: 01-09-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65384	66 X 551.00 LB DRUM (1751)			

SPECIAL PRICING APPLIES

06Y65384

ITEM	CODE	TERMS AND CONDITIONS FOR EACH ITEM
	(0005)	NET 30 DAYS

TOTAL AMOUNT FOR THIS ORDER INVOICE 59,822.07

* * * EXPORT SHIPMENT * * *

R36-D01-T001-P --*** CO-21 DIV-10 009404 PAGE 1 LAST PAGE
666 CUSTOMER REQUEST CARR *20CUSE 0175 0175 BAYER CORPORATION

**0032

TERMS AND CONDITIONS: NOTWITHSTANDING ANY CONTRARY OR INCONSISTENT CONDITIONS THAT MAY BE EMBODIED IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
SUBJECT TO THE PRICES, TERMS AND CONDITIONS OF THE MUTUALLY EXECUTED CONTRACT BETWEEN US OR IF NO SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
SUBJECT TO OUR REGULAR SCHEDULED PRICE AND TERMS IN EFFECT AT TIME OF SHIPMENT AND SUBJECT TO THE TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE
HEREOF

M8258
Rev 1/95

CUSTOMER'S INVOICE

Bayer Corporation, Pittsburgh, PA 15205-9741

FORM M258A

AB0000079449

PLEASE INDICATE BELOW ANY COMMENTS OR QUESTIONS YOU HAVE REGARDING BILLING AND/OR PRODUCT DATA SHOWN ON THE INVOICE.

CONDITIONS

1. Seller reserves the right, among other remedies, either to cancel this contract or suspend further deliveries under it in the event Buyer fails to pay for any one shipment when same becomes due. Should Buyer's financial responsibility become unsatisfactory to Seller, cash payments or satisfactory security may be required by Seller.

2. Unless otherwise agreed, it is understood the product herein specified is for consumption in the United States of America.

3. Seller shall not be required to deliver in any month more than monthly quantity specified above, or if no monthly quantity specified, more than the pro rata amount of the maximum quantity specified.

4. Seller shall not be bound to tender delivery of any quantities for which Buyer has not given shipping instructions.

5. Deliveries may be suspended by either party in case of act of God, war, riots, fire, explosion, flood, strike, lockout, injunction, inability to obtain fuel, power, raw materials, labor, containers, or transportation facilities, accident, breakage of machinery or apparatus, national defense requirements, or other causes beyond the control of either party, preventing the manufacture, shipment, acceptance or consumption of a shipment of the product, or of a material upon which the manufacture of the product of this contract is dependent. Such deliveries so suspended shall be cancelled without liability, but the contract shall otherwise remain unaffected. Seller may during any period of shortage due to any of said causes, allocate its supply of such raw materials or goods among itself, for its own manufacturing uses, and its customers in such manner as Seller deems practicable.

6. In case of bulk carload, tank truck or tank car shipments, shipper's weights, certified to by sworn weighmaster, shall govern.

7. Seller warrants title and that all goods sold hereunder shall conform to Seller's specifications, if any. Subject to the preceding sentence and except as otherwise stated herein, SELLER MAKES NO WARRANTY EXTENDING BEYOND THE DESCRIPTION OF THE GOODS ON THE FACE HEREOF. THERE ARE NO OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, AS TO MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER MATTER WITH RESPECT TO THE GOODS. SELLER SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES. Claims on account of weight, quality, loss of or damage to the product shall be made in writing as promptly as possible. Seller's liability for damages shall in no event exceed the purchase price of the particular delivery with respect to which damages are claimed. Unless otherwise stated, Seller's standard specifications for quality shall govern. Without limiting the generality of the foregoing, Buyer expressly assumes all risk of patent infringement by reason of its use of material provided hereunder in combination with other material or in the operation of any process.

8. Any tax or governmental charge or increase in same hereafter becoming effective increasing the cost to Seller of producing, selling or delivering the product or of procuring materials used therein, and any tax now in effect or increase in same payable by Seller because of this sale, such as Sales Tax, Use Tax, Retailer's Occupational Tax, Gross Receipts Tax, may, at Seller's option, be added to the price herein specified.

9. The price, point of delivery and terms of payment herein specified may be revised by Seller to reflect Seller's list price, point of delivery and terms of payment in effect at the time of shipment.

10. If Seller desires to revise the price, point of delivery or terms of payment pursuant to the preceding paragraph, but is restricted to any extent against so doing by reason of any law, decree, order or regulation of any government, or if the price, point of delivery or terms of payment then in effect is altered by reasons of any law, decree, order or regulation of any government, Seller shall have the right to terminate this contract.

11. Any increase in freight rates paid by Seller on shipments covered by this contract, may, at Seller's option, be added to the price of the material shipped under this contract.

12. Where shipment requires use by Seller of carboys, drums, barrels, or other returnable containers, title to such containers shall remain in Seller and a deposit in the amount required by Seller must be made at the time the product is paid for to insure the return of the container to point of shipment. Such containers must be kept in good condition and may not be used for any material other than that shipped therein, and must be returned within sixty (60) days from date of shipment. I.C.C. regulations require that empty drums must have filling and vent holes properly closed and empty carboys must be thoroughly (completely) drained. On such containers being so returned in good condition, a refund of the deposit will be made.

13. This contract shall bind the successors and assignees of the parties hereto at the option of Seller.

14. This document is not an Expression of Acceptance or a Confirmation document as contemplated in Section 2-207 of the Uniform Commercial Code. The acceptance of any order entered by Buyer is expressly conditioned on Buyer's assent to any additional or conflicting terms contained herein.

15. It is mutually agreed by and between the parties hereto that this contract shall be construed under the laws of the state mentioned in the address of the Buyer division listed on the front hereof.

16. These goods were produced in compliance with all applicable requirements of sections 6, 7 and 12 of the Fair Labor Standards Act, as amended, and of regulations and orders of the United States Department of Labor issued under Section 14 thereof.

REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO:3125012 DATE: 01-09-98 CO-21 DIV-10 DP-0012
EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY 61

DUPLICATE INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
 REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
 ACCOUNT

PURCHASE ORDER #:04-108029
FOB:LEVERKUSEN, GE

ORDER INVOICE NO: 3125012 DATE: 01-09-98
FREIGHT: COLLECT DATE SHIPPED: 01-09-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65385	66 X 551.00 LB DRUM (1751)			

SPECIAL PRICING APPLIES

06Y65385

ITEM	CODE	TERMS AND CONDITIONS FOR EACH ITEM
	(0005)	NET 30 DAYS

TOTAL AMOUNT FOR THIS ORDER INVOICE 59,822.07

*** * * EXPORT SHIPMENT * * ***

R36-D01-T001-P ---* CO-21 DIV-10 009404 PAGE 1 LAST PAGE**
666 CUSTOMER REQUEST CARR *20CUSE 0175 0175 BAYER CORPORATION

****0033**

TERMS AND CONDITIONS NOTWITHSTANDING ANY CONTRARY OR INCONSISTENT CONDITIONS THAT MAY BE EMBODIED IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
 SUBJECT TO THE PRICES, TERMS AND CONDITIONS OF THE MUTUALLY EXECUTED CONTRACT BETWEEN US, OR IF NO SUCH CONTRACT EXISTS YOUR ORDER IS ACCEPTED
 SUBJECT TO OUR REGULAR SCHEDULED PRICE AND TERMS IN EFFECT AT TIME OF SHIPMENT AND SUBJECT TO THE TERMS AND CONDITIONS PRINTED ON THE REVERSE
 HEREOF

PLEASE INDICATE BELOW ANY COMMENTS OR QUESTIONS YOU HAVE REGARDING BILLING AND/OR PRODUCT DATA SHOWN ON THE INVOICE.

CONDITIONS

1. Seller reserves the right, among other remedies, either to cancel this contract or suspend further deliveries under it in the event Buyer fails to pay for any one shipment when same becomes due. Should Buyer's financial responsibility become unsatisfactory to Seller, cash payments or satisfactory security may be required by Seller.

2. Unless otherwise agreed, it is understood the product herein specified is for consumption in the United States of America.

3. Seller shall not be required to deliver in any month more than monthly quantity specified above, or if no monthly quantity specified, more than the pro rata amount of the maximum quantity specified.

4. Seller shall not be bound to tender delivery of any quantities for which Buyer has not given shipping instructions.

5. Deliveries may be suspended by either party in case of act of God, war, riots, fire, explosion, flood, strike, lockout, injunction, inability to obtain fuel, power, raw materials, labor, containers, or transportation facilities, accident, breakage of machinery or apparatus, national defense requirements, or other causes beyond the control of either party, preventing the manufacture, shipment, acceptance or consumption of a shipment of the product, or of a material upon which the manufacture of the product of this contract is dependent. Such deliveries so suspended shall be cancelled without liability, but the contract shall otherwise remain unaffected. Seller may during any period of shortage due to any of said causes, allocate its supply of such raw materials or goods among itself, for its own manufacturing uses, and its customers in such manner as Seller deems practicable.

6. In case of bulk carload, tank truck or tank car shipments, shipper's weights, certified to by sworn weighmaster, shall govern.

7. Seller warrants title and that all goods sold hereunder shall conform to Seller's specifications, if any. Subject to the preceding sentence and except as otherwise stated herein, SELLER MAKES NO WARRANTY EXTENDING BEYOND THE DESCRIPTION OF THE GOODS ON THE FACE HEREOF. THERE ARE NO OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, AS TO MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER MATTER WITH RESPECT TO THE GOODS. SELLER SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES. Claims on account of weight, quality, loss of or damage to the product shall be made in writing as promptly as possible. Seller's liability for damages shall in no event exceed the purchase price of the particular delivery with respect to which damages are claimed. Unless otherwise stated, Seller's standard specifications for quality shall govern. Without limiting the generality of the foregoing, Buyer expressly assumes all risk of patent infringement by reason of its use of material provided hereunder in combination with other material or in the operation of any process.

8. Any tax or governmental charge or increase in same hereafter becoming effective increasing the cost to Seller of producing, selling or delivering the product or of procuring materials used therein, and any tax now in effect or increase in same payable by Seller because of this sale, such as Sales Tax, Use Tax, Retailer's Occupational Tax, Gross Receipts Tax, may, at Seller's option, be added to the price herein specified.

9. The price, point of delivery and terms of payment herein specified may be revised by Seller to reflect Seller's list price, point of delivery and terms of payment in effect at the time of shipment.

10. If Seller desires to revise the price, point of delivery or terms of payment pursuant to the preceding paragraph, but is restricted to any extent against so doing by reason of any law, decree, order or regulation of any government, or if the price, point of delivery or terms of payment then in effect is altered by reasons of any law, decree, order or regulation of any government, Seller shall have the right to terminate this contract.

11. Any increase in freight rates paid by Seller on shipments covered by this contract, may, at Seller's option, be added to the price of the material shipped under this contract.

12. Where shipment requires use by Seller of carboys, drums, barrels, or other returnable containers, title to such containers shall remain in Seller and a deposit in the amount required by Seller must be made at the time the product is paid for to insure the return of the container to point of shipment. Such containers must be kept in good condition and may not be used for any material other than that shipped therein, and must be returned within sixty (60) days from date of shipment. I.C.C. regulations require that empty drums must have filling and vent holes properly closed and empty carboys must be thoroughly (completely) drained. On such containers being so returned in good condition, a refund of the deposit will be made.

13. This contract shall bind the successors and assignees of the parties hereto at the option of Seller.

14. This document is not an Expression of Acceptance or a Confirmation document as contemplated in Section 2-207 of the Uniform Commercial Code. The acceptance of any order entered by Buyer is expressly conditioned on Buyer's assent to any additional or conflicting terms contained herein.

15. It is mutually agreed by and between the parties hereto that this contract shall be construed under the laws of the state mentioned in the address of the Buyer division listed on the front hereof.

16. These goods were produced in compliance with all applicable requirements of sections 8, 7 and 12 of the Fair Labor Standards Act, as amended, and of regulations and orders of the United States Department of Labor issued under Section 14 thereof.



REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3125012 DATE: 01-09-98 CO-21 DIV-10 DP-0012
EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

West Helena Acc. Dept.

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY

61

RECEIVED
JAN 23 1998
RECEIVED

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT.

PURCHASE ORDER #: 04-108029
FOB: LEVERKUSEN, GE

ORDER INVOICE NO: 3125012 DATE: 01-09-98
FREIGHT: COLLECT DATE SHIPPED: 01-09-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	NB26	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07

080081 06Y65385 66 X 551.00 LB DRUM (1751) ENTERED

SPECIAL PRICING APPLIES

06Y65385

FEB 19 1998

TERMS AND CONDITIONS FOR EACH ITEM

WEST HELENA

59,822.07

VENDOR #		INVOICE #	
2987		3125012	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
108029		1	010998
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
3			
INVOICE AMT.	DISC. ALLOWED		
59,822.07			
GL NUMBER	AMOUNT		WORK ORDER #
C153 5910	59,822.07		
C153			
DATE			

LAST PAGE
CORPORATION

**0033

ED IN YOUR PURCHASE ORDER. YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

AD30080679449



ILSCOT - GUIDROZ INTERNATIONAL

FMC NO 4054

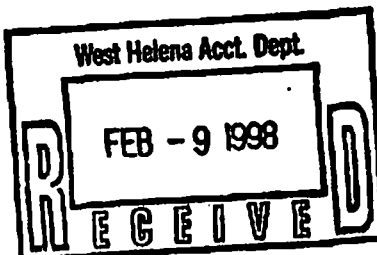
MEMBER OF NATIONAL BROKERS & FORWARDERS
ASSOCIATION OF AMERICA

2815 DIVISION STREET
SUITE 202
METAIRIE, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898

TO: CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE



INVOICE # 53342

OUR REFERENCE	DATE	YOUR REFERENCE		
53220	02/06/98	BAYER LEVERKUSEN TO SAJOBABONY HUNGARY		
CARRIER	ON BOARD DATE	PORT OF LOADING	PORT OF DISCHARGE	ETA
	/ /	GERMANY	SAJABABONY	01/23/98
BILL OF LADING NO.		COMMODITY:		
		3,4DCS-4 TRUCKLOADS 66 DRS EACH		

39600 TO ARRIVE FEB 2,3,4,1998

ENCLOSURES	ORIG.	COPY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING			AIR/OCEAN FREIGHT	
INS. CERTIFICATE			INLAND FREIGHT	
CONSULAR INVOICE			DRAYAGE/PORT SERVICES	
COMMERCIAL INVOICE			INSURANCE	
BANK INSTRUCTION			CONSULAR FEES	
			DOCUMENT EXPRESS	
			OTHER	

ENTERED
FEB 13 1998
WEST HELENA

VENDOR #		INVOICE #	
12347		53342	
P.O. #	REC. RPT. #	INV. CO	INV. DATE
		1	020698
TERMS CODE	DUE DATE	FRT. BILL CO	SALES ORDER #
N			
INVOICE AMT.	DISC. ALLOWED		
6924.50			
GL NUMBER	AMOUNT	WORK ORDER #	
C 1535920	6924.50		
DONE BY	DATE	APPROVED BY	ENTERED BY

6625.00

225.00

14.50

25.00

35.00

R CHECK

\$ 6924.50

/E YOU.

IED AND A TRUE COPY OF EACH PERTINENT DOCUMENT
OF ANY REBATE DIRECTLY, OR INDIRECTLY.

AB0000079449



ILSCOT - GUIDROZ INTERNATIONAL

FMC NO 4054

MEMBER OF NATIONAL BROKERS & FORWARDERS
ASSOCIATION OF AMERICA

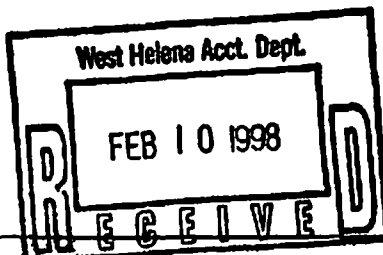
2815 DIVISION STREET
SUITE 202
METAIRIE, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898

TO: CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE

INVOICE # 41007



OUR REFERENCE	DATE	YOUR REFERENCE
41007	02/06/98	BAYER TANKS FROM GERMANY

CARRIER	ON BOARD DATE	PORT OF LOADING	PORT OF DISCHARGE	ETA
	/ /	ROTTERDAM	NOLA	/ /

BILL OF LADING NO.	COMMODITY
	PICK UP NOLA/TRUCK TO W.HELENA

RETURN TO NOLA EMPTY AND IDSCHARGE TANK TO LEASING COMPANY

FEB 13 1998

ENCLOSURES	ORIG.	COPY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING			AIR/OCEAN FREIGHT	
INS. CERTIFICATE			INLAND FREIGHT	
CONSULAR INVOICE			DRAYAGE/PORT SERVICES	
			INSURANCE	
			CONSULAR FEES	

WEST HELENA

VENDOR #		INVOICE #	
12347		41007	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
		1	02/06/98
TERMS CODE	DUE DATE	FRY. BIL CD	SALES ORDER #
8			
INVOICE AMT.		DISC. ALLOWED	
5020.00			
GL NUMBER	AMOUNT	WORK ORDER #	
C 153 8920	5020.00		
DONE BY		APPROVED BY	
RK		JTW	
DATE		ENTERED BY	
2-11-98			

40.00

930.00

385.00

930.00

385.00

930.00

245.00

930.00

245.00

\$ 5020.00

YOU.

RELATING TO THESE CHARGES. THIS COMPANY HAS A POLICY AGAINST PAYMENT SOLICITATION, OR RECEIPT OF ANY REBATE DIRECTLY, OR INDIRECTLY, WHICH WOULD BE UNLAWFUL UNDER THE UNITED STATES SHIPPING ACT OF 1984.



GILSCOT - GUIDROZ INTERNATIONAL

FMC NO 4054

MEMBER OF NATIONAL BROKERS & FORWARDERS
ASSOCIATION OF AMERICA

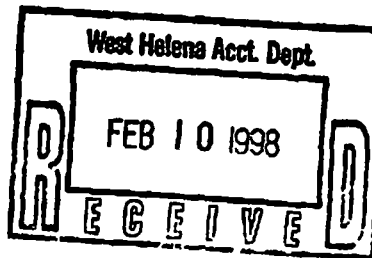
2815 DIVISION STREET
SUITE 202
METAIRIE, LA 70002 USA
PHONE (504) 887-8897
FAX (504) 887-8898

TO: CEDAR CHEMICAL CORP.
HIGHWAY 242 SOUTH

WEST HELENA, AR 72390

ATTN: ACTS RECEIVABLE

INVOICE # 41006



OUR REFERENCE	DATE	YOUR REFERENCE
---------------	------	----------------

41006 02/06/98

BAYER TANKS FROM GERMANY

CARRIER	ON BOARD DATE	PORT OF LOADING	PORT OF DISCHARGE	ETA
---------	---------------	-----------------	-------------------	-----

/ / ROTTERDAM

NOLA

BILL OF LADING NO.	COMMODITY:
--------------------	------------

PICK UP NOLA /TRUCK TO W.HELENA

FEB 13 1998

RETURN TO NOLA EMPTY AND DISCHARGE TANK TO LEASING COMPANY

ENCLOSURES	ORIG.	COPY	DESCRIPTION OF CHARGES	AMOUNT
BILLS OF LADING			AIR/OCEAN FREIGHT	
INS. CERTIFICATE			INLAND FREIGHT	
CONSULAR INVOICE			DRAYAGE/PORT SERVICES	
COMMERCIAL INVOICE			INSURANCE	
BANK INSTRUCTION			CONSULAR FEES	
			DOCUMENT EXPRESS	14.50
			OTHER	
			GILSCOT HANDLING@10.	40.00

WEST HELENA

930.00
280.00
930.00
245.00
930.00
315.00
930.00
315.00

VENDOR #		INVOICE #	
12347		41006	
Q. #	REC. RPT. #	INV. CD	INV. DATE
		1	020298
TERMS CODE	DUE DATE	FAT BILL CD	SALES ORDER #
N			
INVOICE AMT.		DISC. ALLOWED	
4929.50			
QI NUMBER	AMOUNT	WORK ORDER #	
0153 5920	4929.50		
DONE BY		DATE	
RK		2-11-98	
APPROVED BY		ENTERED BY	
ATW			

\$ 4929.50

IF YOU.

AND A TRUE COPY OF EACH PERTINENT DOCUMENT
OF ANY REBATE DIRECTLY, OR INDIRECTLY.

AB0000079449

KEEP OPEN

PRINT DATE 6/25/97 TIME 8:13:45

CEDAR CHEMICAL CORPORATION
MEMPHIS, TN.

ORDER DATE 4/23/97 ORDER NUMBER 42607

*****OFFICE COPY*****

SOLD TO:
K. D. FEDDERSEN & CO.
UEBERSEEGESELLSCHAFT MBH
GOTENSTRABE 11 A
P.O. BOX 10 10 20
HAMBURG GERMANY 20007

SHIP TO:
K.D. FEDDERSEN
EXPORT
SAJOBABONY, HUNGARY

CHANGE ORDER

00000-0000

REQUESTED	CUST. NO.	CUST. ORDER NO.	SALESMAN	FRT. PPD/COL
4/23/97	347E-00	715027	J. WHITSITT	PREPAID

SHIPPED FROM	FOB POINT	SHIP VIA	TERMS
WEST HELENA PLANT	SHIPPING POINT TRK		NET DUE 30 DAYS

QTY ORDERED	CONTAINER SIZE	ITEM NUMBER DESCRIPTION	UNIT PRICE	BILLING UNIT	EXTENDED SALE PRICE
-------------	----------------	-------------------------	------------	--------------	---------------------

145200	LBS	3020 DCA	BULK	LBS	217,800.00
--------	-----	----------	------	-----	------------

SHIPMENT: NOVEMBER 97
*****6/25/97 UPDATE***
PRICE ADJUSTMENT.

TOTAL ORDER AMOUNT 217,800.00

*Germany
Brauer
Jan 98

AB0000079449

Journal Voucher

[illegible]

*** RECD AT PLANT**

Bayer - DCA

Load Dec

	Date	Inv #	Drms	Net	Lbs	US\$	Per # Price
DCA Purchase	12/9/97	3041749			41,579	78,505.38	1.840
DCA Purchase	12/2/97	3041751			45,239	83,239.76	1.840
DCA Purchase	12/28/97	3041753			42,020	77,316.80	1.840
DCA Purchase	12/29/97	3041752			43,916	80,805.44	1.840
DCA Purchase	1/2/98	3041754			44,092	81,129.28	1.840
DCA Purchase	1/2/98	3041762			42,461	78,128.24	1.840
DCA Purchase	1/2/98	3041759			43,387	79,832.08	1.840
DCA Purchase							
					302,694		
Ocean Freight							0.000
Ocean Freight							0.000
Duty							0.000
Duty							0.000
Inland Freight							0.000
Total Cost delivered to Plant						558,956.96	1.840

Accounting:	\$ Dollars	Unit Cst
C153-5910	558,956.96	
C153-5920	0.00	
Total	302,694	558,956.96
		1.840

REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO:3041749

DATE: 12-09-97 CO-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

West Helena Acct. Dept.

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

RECEIVED
DEC 15 1997
RECEIVED

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
 REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
 ACCOUNT.

PURCHASE ORDER #:04-087455
POB:NEW ORLEANS, LA

ORDER INVOICE NO: 3041749 **DATE: 12-09-97**
FREIGHT: COLLECT **DATE SHIPPED: 12-02-97**

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	41,579.00	1.84	76,505.36
080081 06Y63637					
BULK CONT:SNIU121307 GW: 50,000 TW: 8,421 NW: 41,579 (LBS)					
ASSAYZ100.00					

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
 ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
 2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

VENDOR #		INVOICE #	
2987		3041749	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	120997
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
3			
INVOICE AMT.		DISC. ALLOWED	
76,505.36			
GL NUMBER	AMOUNT	WORK ORDER #	
C153 5910	76,505.36		
DONE BY		DATE	APPROVED BY
RK		12-21-97	[Signature]
		ENTERED BY	

LAST PAGE
 ATION

**0017

IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
 O SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
 ERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

orporation, Pittsburgh, PA 15205-8741

AB0000079449

RAW MATERIAL RECEIVING RECORD

NO 10848

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

0330

RECEIVED BY

KC

SECTION 1

DATE RECEIVED: 12-2-97 TIME OF TRUCKING: 04:087455 GROSS WEIGHT: 51688

SHIPPER: SAGER CHEMICAL CARRIER: E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	SEA CONTAINER	Unit 6	3020	DCM

COMMENTS

P.O.A. IN LAB

SECTION 2

RECIPIENT: Singh / Valley TIME SAMPLE/CERTIFICATE TAKEN TO LAB: 0420

UNLOADED AT (tank number, unit, warehouse, etc.): Unit 6 T6210 17 T6211

COMMENTS

SECTION 3

DATE RECEIVED: 12-2-97 TIME OF TRUCKING: 04:087455 GROSS WEIGHT: 51688

SHIPPER: SAGER CHEMICAL CARRIER: E

COMMENTS: C.C. 1592 H.C. 201

SECTION 4

DATE RECEIVED: 12-2-97 TIME OF TRUCKING: 04:087455 GROSS WEIGHT: 51688

SHIPPER: SAGER CHEMICAL CARRIER: E

PLANT WEIGHT: NET UNLOADING TIMES: START TIME: END TIME:

COMMENTS

West Helena Act. Dept.

Bayer 

REMIT TO:

BAYER CORPORATION

P.O. BOX 75662

CHARLOTTE, NC 28275-8662

DEC 19 1997

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE

NO: 3041751

DATE: 12-12-97 CO-21 DIV-10 DP-0012

BILL TO: 005761-001

SHIP TO: 005761-001

CEDAR CHEMICAL CORP

P.O. BOX 2749

W HELENA AR 72390

CEDAR CHEMICAL CORP

HWY 242 S

W HELENA AR 72390

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT.

PURCHASE ORDER #: 04-087455

FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041751

DATE: 12-12-97

FREIGHT: COLLECT

DATE SHIPPED: 12-02-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	45,239.00	1.84	83,239.76

080081 06Y63638

BULK CONT: TIFU117029 GW

50,000 TW:

4,761 NW:

45,239

(BS)

ASSAY: 100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP, PO BOX
2749, WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

ENTERED
JAN 7 1998
WEST HELENA

VENDOR #		INVOICE #	
2987		3041751	
P.O. #	REC. RPT. #	INV. CO	INV. DATE
87455		1	12/29/97
TERMS CODE	DUE DATE	FRT BILL CO	SALES ORDER #
2			
INVOICE AMT.		DISC. ALLOWED	
83,239.76			
GL NUMBER	AMOUNT	WORK ORDER #	
C 1535910	83,239.76		
DONE BY		ENTERED BY	
RK		9/10	
DATE		APPROVED BY	
12-31-97			

E

83,239.76

LAST PAGE
LATION

**0229

IF IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Bayer Corporation, Pittsburgh, PA 15205-8741

AB0000079449

RAW MATERIAL RECEIVING RECORD

NO 10849

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE 0335		RECEIVED BY	
SECTION 1			
DATE 2.2.97	ORDER NO. 111-047055	CAR OR TRUCK NO. TIFC-117029-0	DECLARED WEIGHT Net 52955
SHIPPER Bayer Chemical		CARRIER T.M. 1/E	
QUANTITY 1	CONTAINER 50A CONTAINER	DESTINATION Unit 6	DESCRIPTION DCA
COMMENTS C.O.A. in Unit 6			
SECTION 2			
RECIPIENT J. L. Miller		TIME SAMPLE/CERTIFICATE TAKEN TO LAB 6420	
UNLOADED AT (tank number, unit, warehouse, etc.) Unit 6 T-210 & T-211			
COMMENTS			
SECTION 3			
REASON FOR REJECTION C 2	ASPECT ✓	REJECT	REASON FOR REJECTION
COMMENTS C.O.A. 99.8 H.O. 102			
SECTION 4			
REASON FOR REJECTION L.A.M.	ASPECT ✓	REJECT	REASON FOR REJECTION
PLANT WEIGHT NET	UNLOADING TIMES START TIME END TIME		
COMMENTS			

West Helena Acct. Dept.



REMIT TO:

BAYER CORPORATION

P.O. BOX 75662

CHARLOTTE, NC 28275-5662

RECEIVED
JAN 06 1998
RECEIVED

FIBERS ORGANICS AND RUBBER DIV

100 BAYER ROAD

PITTSBURGH, PA. 15205

ORDER INVOICE

NO: 3041753

DATE: 12-31-97 CO-21 DIV-10 DP-0012

BILL TO: 005761-001

SHIP TO: 005761-001

CEDAR CHEMICAL CORP

P.O. BOX 2749

W HELENA AR 72390

CEDAR CHEMICAL CORP

HWY 242 S

W HELENA AR 72390

12-24-97
10976

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT.

PURCHASE ORDER #: 04-087455

FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041753

DATE: 12-31-97

FREIGHT: COLLECT

DATE SHIPPED: 12-26-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	42,020.00	1.84	77,316.80

080081 06Y63640

BULK CONT: SNIU121076 GW: 45,000 TW: 2,980 NW: 42,020 (LBS)
ASSAY: 100.00

ENTERED

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

JAN 30 1998

VENDOR #		INVOICE #	
2987		3041753	
P.O. #	REC RPT #	INV CD	INV. DATE
87455		1	12/31/97
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
3			
INVOICE AMT		DISC ALLOWED	
77,316.80			
GL NUMBER	AMOUNT	WORK ORDER #	
C153 5910	77,316.80		
DATE		APPROVED BY	
12/31/97			
DONE BY		ENTERED BY	
DV			

77,316.80

LAST PAGE
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**0031

ED IN YOUR PURCHASE ORDER. YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

orporation. Pittsburgh, PA 15205-0740 15205-0740 79449

RAW MATERIAL RECEIVING RECORD

NE 10976

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE 1035		SECTION 1		RECEIVED BY DLV
DATE 12/24/97		ORDER NO. NA	CAR OR TRUCK NO. VU121076-P	Net NA 42020
SHIPPER Boyer Corp			CARRIER Truck E	
QUANTITY 1	CONTAINER S/C	DESTINATION unit 6	RAW MAT CODE # 3020	DESCRIPTION DCA
COMMENTS C of A in folder				
SECTION 2		TIME SAMPLE/CERTIFICATE TAKEN TO LAB		
RECIPIENT L.S.A		13 10		
UNLOADED AT (tank number, unit, warehouse, etc.) T: 2 10				
COMMENTS				
SECTION 3				
REASON FOR TLP	ACCEPT X	REJECT	REASON FOR REJECTION	
COMMENTS				
SECTION 4				
REASON FOR Mc Baide	ACCEPT ✓	REJECT	REASON FOR REJECTION	
PLANT WEIGHT NET	UNLOADING TIMES START TIME 1315 END TIME			
COMMENTS				



West Helena Acct. Dept

REMIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

RECEIVED
JAN 06 1998
RECEIVED

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE

BILL TO: 005761-001

NO: 3041752

DATE: 12-29-97 CO-21 DIV-10 DP-0012

SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

12-19-97
10952

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-087455

FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041752

DATE: 12-29-97

FREIGHT: COLLECT

DATE SHIPPED: 12-18-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	43,916.00	1.84	80,805.44

080081 06Y63639

BULK CONT: SNIU121118 GW: 50,000 TW: 6,084 NW: 43,916 (LBS) ENTERED
ASSAY: 100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

JAN 30 1998

WEST HELENA

VENDOR #		INVOICE #	
2987		3041752	
P.O. #	REC RPT. #	INV. CD	INV DATE
87455		1	122997
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
3			
INVOICE AMT		DISC ALLOWED	
80,805.44			
GL NUMBER		AMOUNT	WORK ORDER #
C153 8910		80,805.44	
DATE		APPROVED BY	ENTERED BY
1-28-98			

E

80,805.44

LAST PAGE
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**0049

IF IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

operation Pittsburgh, PA 15205 00079449

RAW MATERIAL RECEIVING RECORD

NO 10952

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

12:40

RECEIVED BY

M. Oliver

SECTION 1

DATE CONTAINER NO. CASE OR TANK NO. DECLASS. NO.

12-19-97

04087455

SN 111211189-~~111~~

Net 43916

SHIPPER

Bayer

CARRIER

H. Triple E

QUANTITY

1

CONTAINER

S/C

DESTINATION

unit #6

RAW MAT CODE #

3020

DESCRIPTION

DCA

COMMENTS

Lab Mat C.O.A.

SECTION 2

RECIPIENT TIME SAMPLE CERTIFICATE TAKEN TO LAB

E. P. Co. 12-20-97

UNLOADED AT (tank number, unit, warehouse, etc.)

T-2000-11

COMMENTS

SECTION 3

LAB TECH. ANALYST REPORT REASON FOR REJECTION

C m

✓

COMMENTS

*COA 99.9
H.C. .04*

SECTION 4

WHICH STORAGE AREA REPORT REASON FOR REJECTION

L. Allw

✓

PLANT WEIGHT

UNLOADING TIMES

NET

START TIME

END TIME

COMMENTS

Dropped Sca Container @ Unit

REMIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE

BILL TO: 005761-001

NO:3041754

DATE: 01-02-98 CO-21 DIV-10 DP-0012

SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP

HWY 242 S

W HELENA AR 70390 West Helena Airt. Dept.

RECEIVED
JAN 12 1998
RECEIVED

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR ACCOUNT

PURCHASE ORDER #: 04-087455

FOB:NEW ORLEANS, LA

ORDER INVOICE NO: 3041754

DATE: 01-02-98

FREIGHT: COLLECT

DATE SHIPPED: 12-28-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE - PURE	44.092.00	1.84	81,129.28

080081 06Y63641

BULK CONT: SNIU121281 GW: 50,000 TW: 5,908 NW: 44,092 (LBS)
ASSAY: 100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

[illegible]

81.129.28

JAN 30 1998

LAST PAGE
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★★0022

IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
IF SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

REVERSE SIDE:
AB0000079449

RAW MATERIAL RECEIVING RECORD

No 10975

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

11:30

RECEIVED BY

M. Sullivan

SECTION 1

DATE ORDER NO. CAR OR TRUCK NO. DECLARED WEIGHT

12-24-97

n/a

SN1U121281-6

Net n/a 44092

SHIPPER

Bayer

CARRIER

Triple E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	S/C	unit #2	3020	DCA

COMMENTS

Lab Has C.O.A.

SECTION 2

RECIPIENT TIME SAMPLE/CERTIFICATE TAKEN TO LAB

J.K. Suleh

UNLOADED AT (tank number, unit, warehouse, etc.)

Unit 2

COMMENTS

Specimen # 210 - 211

SECTION 3

LAB TECHNICIAN ACCEPT REJECT REASON FOR REJECTION

JH

☒

COMMENTS

% DCA 99.9

H₂O 100 ppm

SECTION 4

SHIFT SUPERVISOR ACCEPT REJECT REASON FOR REJECTION

McBride

☒

PLANT WEIGHT

UNLOADING TIMES

NET

START TIME

12:10

END TIME

COMMENTS

Spotted S/C At Unit

**REMIT TO:**

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3041762

DATE: 01-02-98 CD-21 DIV-10 DP-0012
SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

12-30-97
11002

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041762 DATE: 01-02-98
FREIGHT: COLLECT DATE SHIPPED: 12-30-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	42,461.00	1.84	78,128.24

080081 06Y63644

BULK CONT: SNIU121073 GW: 50,000 TW: 7,539 NW: 42,461 (LBS)
ASSAY: 100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

JAN 30 1998

WEST HELENA

VENDOR #		INVOICE #	
2987		3041762	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
87455		1	010298
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
3			
INVOICE AMT.		DISC ALLOWED	
78,128.24			
GL NUMBER		AMOUNT	WORK ORDER #
01535910		78,128.24	
DATE		APPROVED BY	ENTERED BY
1-28-98		GTW	

78,128.24

LAST PAGE
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**0024

IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
IF SUCH CONTRACT EXISTS YOUR ORDER IS ACCEPTED
RMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Pittsburgh PA 15205 00079449

RAW MATERIAL RECEIVING RECORD

N^o 11002

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE 7:10	SECTION 1	RECEIVED BY K C
-------------------------	-----------	--------------------

DATE 11-7	ORDER NO. NA	CAR OR TRUCK NO. SNTA 21073-1	Net NA 42461
--------------	-----------------	----------------------------------	-----------------

SHIPPER J. S. W.	CARRIER Triple E
---------------------	---------------------

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	50A 20' AIR-12	UNIT 6	NA	DCA

COMMENTS

SECTION 2
RECIPIENT

TIME SAMPLE/CERTIFICATE TAKEN TO LAB
--

UNLOADED AT (tank number, unit, warehouse, etc.)
--

COMMENTS

SECTION 3
LAB TECHNICIAN TLP

AGREED X	
-------------	--

COMMENTS

SECTION 4

--	--

PLANT WEIGHT NET	UNLOADING TIMES START TIME	END TIME
---------------------	-------------------------------	----------

COMMENTS Dropped Sea Container @ Unit
--

**REMIT TO:**

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE

BILL TO: 005761-001

NO: 3041759

DATE: 01-02-98 CO-21 DIV-10 DP-0012

SHIP TO: 005761-001

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
HWY 242 S
W HELENA AR 72390

12-30-97
11003

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #: 04-087455
FOB: NEW ORLEANS, LA

ORDER INVOICE NO: 3041759 DATE: 01-02-98
FREIGHT: COLLECT DATE SHIPPED: 12-30-97

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	43,387.00	1.84	79,832.08

080081 06Y63643

BULK CONT: SNIU121108 GW: 50,000 TW: 6,613 NW: 43,387 (LBS)
ASSAY: 100.00

SEND A CERTIFICATE OF DELIVERY OF IMPORTED MERCHANDISE TO THE
ATTENTION OF MR BOB CHRISTIAN; CEDAR CHEMICAL CORP; PO BOX
2749; WEST HELENA, AR 72390. SPECIAL PRICING APPLIES

ENTERED

JAN 30 1998

WEST HELENA

VENDOR #		INVOICE #	
2987		3041759	
P.O. #	REC RPT. #	INV CD	INV DATE
87455		1	010298
TERMS CODE	DUE DATE	FRT BILL CD	SALES ORDER #
2			
INVOICE AMT		DISC ALLOWED	
79,832.08			
GL NUMBER	AMOUNT	WORK ORDER #	
C 153 5910	79,832.08		
DATE		APPROVED BY	
1-29-98		ANN	
DONE BY		ENTERED BY	
JV			

79,832.08

LAST PAGE
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**0023

IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
SUCH CONTRACT EXISTS YOUR ORDER IS ACCEPTED
RMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Pittsburgh, PA 15205-0711

AB000079449

RAW MATERIAL RECEIVING RECORD

NO 11073

CEDAR CHEMICAL 9000-1 REV: C

TIME IN AT GATE

2:30

RECEIVED BY

R L

SECTION 1

DATE	ORDER NO.	CAR OR TRUCK NO.	Net
2-3-77	NA	SATU 2104-6	NA 43387

SHIPPER	CARRIER
DAY	701/4 E

QUANTITY	CONTAINER	DESTINATION	RAW MAT CODE #	DESCRIPTION
1	5014 CONTAINER	UNIT 6	NA	DCA

COMMENTS

COA in LAB

SECTION 2

RECIPIENT	TIME SAMPLE/CERTIFICATE TAKEN TO

UNLOADED AT (tank number, unit, warehouse, etc.)

COMMENTS

SECTION 3

LAB TECHNICIAN	ACCEPT	REJECT	REASON FOR REJECT
TCP	X		

COMMENTS

SECTION 4

LAB SUPERVISOR	ACCEPT	REJECT	REASON FOR REJECT
L. ALN	✓		

PLANT WEIGHT	UNLOADING TIMES	
NET	START TIME	END TIME

COMMENTS

D.20 per sea container @ unit

5102-1590



FMC Corporation
1735 Market Street
Philadelphia PA 19103
United States of America

Change to Purchase order

PO number/Date

44023114

03/11/1998

RECEIVED

AUG 28 1998

Contact Person/Telephone.....

Baltimore Raw Mat/410.355-6400

Vendor Number :10025721
CEDAR CHEMICAL CORP.
49 PHILLIPS RD.
WEST HELENA, AR 72390

Delivery:

Payment Terms: Within 30 days Due net

Preferred Carrier : N/A

Bill To :

FMC Corporation
Baltimore Accounts Payable
PO Box 1616
Baltimore, MD 21203
Tel: (410) 355-6400

PURCHASING CONTACT: SUZANNE WILLIAMS, EXT. 2518

PLANT CONTACT: ELAINE CURTIS, EXT. 2563

Item	Material Number	Unit	Description	Price per unit	Net value
	Order Qty.				
00030	451,500	Dollar	Cedar Scope change & other reimbursement	1.00	451,500.00

Delivery date 08/31/1998

This supplement to purchase order 44023114 is
issued to reimburse Cedar Chemical for an amount
not to exceed \$451,500.

Specific text for this purchase order and any
related invoices should read as follows:

"Capital fee to cover the full amount FMC agreed
to reimburse Cedar for previously agreed upon process
scope changes and certain other costs in installing
equipment to toll 5-nitro for FMC".

HARD COPY OF CHANGE TO PURCHASE ORDER MAILED TO
GEOFFREY PRATT 08-24-98.

STANDARD P.O. TERMS AND CONDITIONS

Modified 7/29/98

PRICE:

1 This is a firm price order, in the absence of indication of price by Buyer, Seller must not fill this order at a price higher than last quoted or charged to Buyer without Buyer's written consent. Seller represents that the prices charged for the items or service covered by this order comply with applicable government regulations in effect at time of order placement, sale or delivery.

TERMS OF PAYMENT

2 Net 45 Days unless appropriate discount is negotiated.

ATTACHMENTS

3 Documents designated by Buyer as including supplemental terms and conditions, if any, are incorporated by reference the same as if set out in full herein.

CHANGES

4 The Buyer reserves the right at any time to change by written notification any of the following (a) Specifications, drawings and data incorporated in this Purchase Order where the items to be furnished are to be specifically manufactured for the Buyer, (b) quantity, (c) methods of shipment or packaging, (d) place of delivery, (e) time of delivery, (f) any other matters affecting this order.

5 If any change by Buyer causes an increase or decrease in the cost or of the delivery schedule for the Purchase Order, Buyer shall make in writing an equitable adjustment in the contract price, delivery schedule, or both. Any claim by Seller for adjustment under this clause shall be deemed waived unless asserted in writing within ten (10) days from Seller's receipt of the change.

TERMINATION

6 Buyer may terminate this Purchase Order for its convenience, in whole or in part, at any time on written or telegraphic notice to Seller. Upon receipt of such termination, Seller shall promptly comply with the directions contained in such notice and shall, as required, (a) take action necessary to terminate the work as provided in the notice, reimbursing costs and liabilities for the terminated work, (b) protect, preserve and deliver in accordance with Buyer's instructions any property related to the order in Seller's possession and (c) continue the performance of any part of the work not terminated by Buyer.

7 Buyer may also, by written or telegraphic notice to Seller terminate the whole or any part of this order for default (a) if Seller fails to deliver items and material or perform the services required on schedule or (b) if, in any time, reasonable grounds for insecurity arise as to Seller's expected performance (including timely performance) within ten (10) days after Buyer's written demand for adequate assurance. Buyer may also terminate for default if Seller becomes insolvent or makes an assignment for the benefit of creditors or consents to act of bankruptcy or files or has filed against it a petition in bankruptcy or reorganization proceedings.

8 If Buyer terminates all or part of this order for default under Paragraph 7, Buyer may procure upon terms and in a manner it deems appropriate goods and services similar to those terminated. In addition, Buyer may require Seller to deliver any completed or uncompleted goods related to this Purchase Order by agreeing to pay Seller as specified in paragraph 9 below.

9. On termination for Buyer's convenience, Seller at the time of termination, may have in stock or on firm order completed or uncompleted items or raw, semi-processed or completed materials for use in fulfilling this Purchase Order. (A) For completed items or materials, Buyer shall either require delivery of all or part of the completed goods and make payment at the order price, or (without taking delivery) pay Seller the difference, if any, between the order price and the market price (if lower) at the time of termination. (B) For uncompleted items or raw or semi-processed materials, Buyer shall either require Seller to deliver all or part of such goods at the portion of the order price representing the stage of completion, or (without taking delivery) pay Seller for such goods which are properly allocable to this order a portion of the order price representing the stage of completion, reduced by the higher of the market or scrap value of the goods at that stage of completion. (C) For goods which Seller has on firm order, Buyer may, at its option, either take an assignment of Seller's rights under the order or pay the cost, if any, of settling or discharging Seller's obligation under the order. If Buyer terminates for default, Seller shall be liable for additional costs, if any, for the purchase of such similar goods and services to cover such default. Payments to Seller hereunder shall be the sole remedy available to Seller in the event of a termination by Buyer.

10 Buyer's rights and remedies under paragraphs 6-9 inclusive shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Purchase Order.

ASSIGNMENT AND DELEGATION

11 Seller may not delegate, assign, transfer or subcontract this order or any right or obligation hereunder without Buyer's prior written consent. Any purported delegation, assignment, transfer or subcontract shall be void and ineffective and grounds for Buyer's termination of this Purchase Order.

DELIVERY

12 Time is of the essence in the performance of this Purchase Order. Seller shall furnish sufficient labor and management forces, plant, and equipment and shall work such hours (including night shift, overtime, weekend and holiday work) as may be required to assure timely delivery.

13 Regardless of delivery or performance in installments, Seller's obligation is not severable. Buyer need not accept shipments from C.O.D. without its consent and may return them at Seller's risk.

UNUSABLE DELAY

14 Fires, floods, strikes, lockouts, epidemics, accidents, shortages or other causes beyond the reasonable control of the parties, which prevent Seller from delivering, or Buyer from receiving any of the goods and services covered by this Purchase Order shall suspend deliveries until the cause is removed. Subject, however, to Buyer's right of cancellation under Paragraph 6.

TAXES

15 If the goods furnished under this Purchase Order are for resale (as indicated on the front), Buyer will pay any sales or use taxes imposed on such goods, after delivery. Seller will pay all other taxes imposed before delivery to the destination point, including property taxes imposed on goods for which title has passed to Buyer.

APPLICABLE LAWS

16 Seller warrants and agrees that it has complied and will comply with all applicable Federal, State and local laws, codes and regulations, including, without limitation, the following: the Fair Labor Standards Act of 1938, as amended.

SUITS

17 Seller shall, at its expense, defend any action, claim or demand, whether proceeding or otherwise, made against Buyer, its successors and assigns, based on any claim that any goods or any component part delivered or furnished hereunder infringes any U.S. or foreign letters patent, trademark or other right held by third parties except infringement necessarily resulting from adherence to specifications furnished by Buyer. Buyer agrees to notify Seller in writing of any such claim and to provide such assistance, at Seller's expense, as may be reasonably required, in defending the action, claim or demand. Seller shall pay all damages, costs and attorney fees awarded or incurred in any such action, claim or demand.

18 If the goods or any component part furnished hereunder are held to infringe and their use is enjoined, Seller shall, at its option and its own expense (a) pay for Buyer and its successors and assigns the right to continue using the goods, (b) replace such goods with a substantially equivalent non-

infringing product acceptable to Buyer, or (c) modify such goods so they become non-infringing with substantially equivalent performance acceptable to Buyer. Absent (a), (b), (c), Buyer reserves its right at law, and at its option may return the infringing goods to Seller at Seller's expense and Seller promptly shall refund the purchase price to Buyer.

PACKAGING, PACKING LIST AND BILL OF LADING

19 Seller shall be responsible for proper packaging, loading and tie-down to prevent damage during transportation. Seller must bill all shippable containers on a separate memo invoice, return transportation charges will be collect and for Seller's account. Buyer's weight and/or count will be accepted as final and conclusive on all shipments not accompanied by such packing list.

INSPECTION

20 All goods furnished hereunder will be subject to Buyer's final inspection and approval within a reasonable time after delivery irrespective of payment date. Buyer may reject goods not in accordance with the instructions, specifications, drawings, data or Seller's express or implied warranties ("Nonconforming Goods") or may accept some and reject other Nonconforming Goods, at its option. All rejected goods shall be held at Seller's risk. Buyer may return rejected goods to Seller at Seller's risk and expense and Buyer shall have no further obligation for such goods. Payment for any goods shall not be deemed acceptance and in no event shall Buyer incur any liability for payment for rejected goods.

21. Buyer shall have a reasonable time (not less than ten (10) days from receipt) to submit claims of count, weight, quantity, loss or damage to delivered goods. Buyer will calculate damages on claims and deduct the amount from Seller's invoice. If invoice was previously paid, Seller will reimburse the amount of damages to Buyer.

22 Seller shall assume responsibility for and will pay any and all loss, cost, damage or expense, including attorney fees, and cost of replacement incurred by Buyer attributed to Buyer's rejection of Nonconforming Goods or to Seller's untimely delivery.

INDEMNITY

23 The Seller agrees to defend, indemnify and save the Buyer harmless against all liabilities, claims or demands whether in tort, in contract or otherwise for injuries or damages to any person or property arising out of Seller's act or omission in the performance of this Purchase Order, including, without limitation, a breach of Seller's warranties contained in paragraph 24.

SELLER WARRANTIES

24 By accepting this Purchase Order, Seller warrants that the goods and services furnished will be free from contaminants, defects in materials, design and workmanship, new, merchantable and in full conformity with Buyer's specifications, drawings and data, and Seller's descriptions, promises or samples, and that such goods will be fit for the Buyer's intended use, provided Seller has reason to know such use, and that Seller will convey good title to the goods free and clear from all liens, claims and encumbrances. Seller warrants that it shall be able to fulfill all of its obligations under this agreement with no degradation in performance due to the calendar change from 1999 to 2000 and beyond January 1, 2000. These warranties shall survive acceptance of the goods delivered hereunder, and are in addition to any warranties of additional scope given to Buyer by Seller. No implied warranties by the Seller are excluded. All warranties run to both Buyer and its customers.

25 Seller, without cost to Buyer, shall promptly do all things necessary to correct any breach of the above warranties in a manner satisfactory to Buyer. If Seller is unable or refuses to repair or replace as Buyer may require, Buyer may (a) contract or otherwise repair, or replace such defective goods and back-charge Seller for the excess cost.

TITLE AND RISK OF LOSS

26. Notwithstanding any other term of this Purchase Order to the contrary, risk of loss of all goods shall remain in Seller until receipt and acceptance of the goods at Buyer's location. Notwithstanding restrictive legends to the contrary title to plans, drawings and specifications for goods shall be vested and remain with Buyer and may be used by Buyer for any purpose.

27 Notwithstanding any other term of this Purchase Order to the contrary, title shall pass to Buyer upon Buyer's acceptance of goods at Buyer's location. If Buyer makes progress payments, title to the goods shall be transferred to Buyer as payments are made, and in the same proportion as the cumulative payments bear to the order price. Seller shall also identify such goods as the property of Buyer, unless Buyer waives identification in writing.

NONDISCLOSURES

28 If Buyer discloses or grants Seller access to any research, development, technical, economic or other business information or "know-how" of a confidential nature, whether reduced to writing or not, Seller agrees, as a condition of receiving such information or "know-how", that it will not use or disclose any such information to any other person at any time, except as may be necessary in the performance of this order, without Buyer's prior written consent. Seller will use such information only to perform this Purchase Order and it will only disclose such information to those of its officers, directors and responsible employees to whom it will be essential to make such disclosure in order to accomplish the purpose of this Purchase Order.

PROPERTY FURNISHED TO SELLER BY BUYER

29 All special dies, molds, patterns, jigs, fixtures, and any other property which Buyer furnished to Seller or specifically pays for to be used in the performance of this Purchase Order, shall be and remain Buyer's property, shall be subject to removal upon Buyer's instruction, shall be for Buyer's exclusive use, shall be held at Seller's risk, and shall be kept insured by Seller at Seller's expense while in its custody or control in an amount equal to the replacement cost, with loss payable to Buyer. Seller will furnish copies of policies or certificates of insurance on Buyer's demand.

RESOLUTION OF CONFLICTS OR INCONSISTENCIES OCCURRING IN THE ORDER

30 It is Seller's responsibility to comply with this Purchase Order and all referenced documents and to clarify with Buyer any inconsistencies or conflicts in any part of this Purchase Order, such as the provisions contained in this document, additional terms and conditions, general specifications, detailed specifications, etc. Should Seller fail to contact Buyer to resolve any such conflicts or inconsistencies, Seller will be solely responsible for errors resulting from conflicts or inconsistencies. Where documents are referenced, the version in effect at the time of order placement shall apply.

31 Acknowledgment of this order, shipment of any goods or rendering of any services pursuant to this order shall be deemed an acceptance of these terms and conditions. No modification or revision or of release from this Purchase Order shall be binding unless agreed to in a writing signed by both Buyer and Seller and specifically labeled as a modification or release. These terms and conditions supersede any submitted by Seller in any acceptance, proposal or acknowledgments and Buyer hereby objects to any additional terms contained in such acceptance, proposal or acknowledgment.

WAIVER

32 Buyer's failure to insist on Seller's strict performance of any of the terms and conditions of this Purchase Order at any time shall not be construed as a waiver by Buyer for performance in the future.

14 b6, b7C, b7D, b7E, b7F, b7G, b7H, b7I, b7J, b7K, b7L, b7M, b7N, b7O, b7P, b7Q, b7R, b7S, b7T, b7U, b7V, b7W, b7X, b7Y, b7Z, b8, b9, b10, b11, b12, b13, b14, b15, b16, b17, b18, b19, b20, b21, b22, b23, b24, b25, b26, b27, b28, b29, b30, b31, b32, b33, b34, b35, b36, b37, b38, b39, b40, b41, b42, b43, b44, b45, b46, b47, b48, b49, b50, b51, b52, b53, b54, b55, b56, b57, b58, b59, b60, b61, b62, b63, b64, b65, b66, b67, b68, b69, b70, b71, b72, b73, b74, b75, b76, b77, b78, b79, b80, b81, b82, b83, b84, b85, b86, b87, b88, b89, b90, b91, b92, b93, b94, b95, b96, b97, b98, b99, b100

AR0000083363

**Change to
Purchase order**

PO number/Date

44023114

03/11/1998



FMC Corporation
1735 Market Street
Philadelphia PA 19103
United States of America

Vendor Number :10025721
CEDAR CHEMICAL CORP.
49 PHILLIPS RD.
WEST HELENA, AR 72390

Item	Material Number Order Qty.	Unit	Description Price per unit	Net value
Please deliver to: CEDAR CHEMICAL CORP. 49 PHILLIPS RD. WEST HELENA, AR 72390				
*** New item ***				
Total net value of all items excl. tax USD				1,521,500.00

THIS PURCHASE ORDER IS ISSUED SUBJECT TO THE TERMS AND
CONDITIONS OF THE TOLL MANUFACTURING AGREEMENT BETWEEN
FMC CORPORATION AND CEDAR CHEMICAL CORPORATION DATED
NOVEMBER 26, 1997.

CONFIRMING - DO NOT DUPLICATE

REQ #40014972/E. CURTIS

IMPORTANT

All shipping papers, invoices and bills of lading must show the Document Number quoted above. All shipments, containers, etc. must be identified with this document number. Ship direct to Consignee at destination.

TERMS AND CONDITIONS:

Acceptance of this order must be at, and limited to, the exact terms and conditions, available from FMC on request, and may not include additional or different terms of conditions.

This order incorporates by reference the equal employment opportunity clause pursuant to the Executive Order 11246, as amended, and the affirmative action clauses pursuant to Section 402 of the Vietnam Era Veterans Readjustment Assistance Act of 1974, as amended, and Section 503 of the Rehabilitation Act of 1973, as amended.

STANDARD P.O. TERMS AND CONDITIONS

Modified 7/29/98

PRICE

1. This is a firm price order, in the absence of indication of price by Buyer. Seller must not fill this order at a price higher than last quoted or charged to Buyer without Buyer's written consent. Seller represents that the prices charged for the items or service covered by this order comply with applicable government regulations in effect at time of order placement, sale or delivery.

TERMS OF PAYMENT

2. Net 45 Days unless appropriate discount is negotiated.

ATTACHMENTS

3. Documents designated by Buyer as including supplemental terms and conditions, if any, are incorporated by reference the same as if set out in full herein.

CHANGES

4. The Buyer reserves the right at any time to change by written notification any of the following: (a) Specifications, drawings and data incorporated in this Purchase Order where the items to be furnished are to be specifically manufactured for the Buyer; (b) quantity; (c) methods of shipment or packaging; (d) place of delivery; (e) time of delivery; (f) any other matters affecting this order.

5. If any change by Buyer causes an increase or decrease in the cost or of the delivery schedule for the Purchase Order, Buyer shall make in writing an equitable adjustment in the contract price, delivery schedule or both. Any claim by Seller for adjustment under this clause shall be deemed waived unless asserted in writing within ten (10) days from Seller's receipt of the change.

TERMINATION

6. Buyer may terminate this Purchase Order in its convenience in whole or in part, at any time on written or telegraphic notice to Seller. Upon receipt of such termination, Seller shall promptly comply with the directions contained in such notice and shall, as required, (a) take action necessary to terminate the work as provided in the notice, minimizing costs and liabilities for the terminated work; (b) protect, preserve and deliver in accordance with Buyer's instructions any property related to the order in Seller's possession and (c) continue the performance of any part of the work not terminated by Buyer.

7. Buyer may also, by written or telegraphic notice to Seller terminate the whole or any part of this order for default: (a) if Seller fails to deliver items and material or perform the services required on schedule or (b) if at any time reasonable grounds for insecurity arise as to Seller's expected performance (including timely performance) within ten (10) days after Buyer's written demand for adequate assurance. Buyer may also terminate for default if Seller becomes insolvent or makes an assignment for the benefit of creditors or commits an act of bankruptcy or files or has filed against it a petition in bankruptcy or reorganization proceedings.

8. If Buyer terminates all or part of this order for default under Paragraph 7, Buyer may procure upon terms and in a manner it deems appropriate goods and services similar to those terminated. In addition, Buyer may require Seller to deliver any completed or uncompleted goods related to this Purchase Order by agreeing to pay Seller as specified in paragraph 9 below.

9. On termination for Buyer's convenience, Seller at the time of termination, may have in stock or on firm order completed or uncompleted items or raw, semi-processed or completed materials for use in fulfilling this Purchase Order. (A) For completed items or materials, Buyer shall either require delivery of all or part of the completed goods and make payment at the order price, or (without taking delivery) pay Seller the difference, if any, between the order price and the market price (if lower) at the time of termination. (B) For uncompleted items or raw or semi-processed materials, Buyer shall either require Seller to deliver all or part of such goods at the portion of the order price representing the stage of completion, or (without taking delivery) pay Seller for such goods which are properly allocable to this order a portion of the order price representing the stage of completion reduced by the higher of the market or scrap value of the goods at that stage of completion. (C) For goods which Seller has on firm order, Buyer may, at its option, either take an assignment of Seller's rights under the order or pay the cost, if any, of settling or discharging Seller's obligation under the order. If Buyer terminates for default, Seller shall be liable for additional costs, if any, for the purchase of such similar goods and services to cover such default. Payments to Seller hereunder shall be the sole remedy available to Seller in the event of a termination by Buyer.

10. Buyer's rights and remedies under paragraphs 6-9 inclusive shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Purchase Order.

ASSIGNMENT AND DELEGATION

11. Seller may not delegate, assign, transfer or subcontract this order or any right or obligation hereunder without Buyer's prior written consent. Any purported delegation, assignment, transfer or subcontract shall be void and ineffective and grounds for Buyer's termination of this Purchase Order.

DELIVERY

12. Time is of the essence in the performance of this Purchase Order. Seller shall furnish sufficient labor and management, tools, plant and equipment and shall work such hours (including night shift, overtime, weekend and holiday work) as may be required to assure timely delivery.

13. Regardless of delivery or performance in installments, Seller's obligation is not severable. Buyer need not accept shipments item C (1) without its consent and may return them at Seller's risk.

INCUSABLE DELAY

14. Fires, floods, strikes, lockouts, epidemics, accidents, shortages or other causes beyond the reasonable control of the parties, which prevent Seller from delivering or Buyer from receiving any of the goods and services covered by this Purchase Order shall suspend deliveries until the cause is removed, subject, however, to Buyer's right of cancellation under Paragraph 6.

TAXES

15. If the goods furnished under this Purchase Order are for resale (as indicated on the invoice), Buyer will pay any sales or use taxes imposed on such goods after delivery. Seller will pay all other taxes imposed before delivery in the destination point, including property taxes imposed on goods for which title has passed to Buyer.

APPLICABLE LAWS

16. Seller warrants and agrees that it has complied and will comply with all applicable Federal, State and local laws, codes and regulations, including, without limitation, the following: the Federal Fair Labor Standards Act of 1938, as amended.

PATENTS

17. Seller shall, at its expense, defend any action, claim or demand, whether governmental or otherwise, made against Buyer, its successors and assigns, based on any claim that any goods or any component part delivered or furnished hereunder infringes any U.S. or foreign letters patent, trademark or other rights held by third parties, except infringement claims only resulting from adherence to specifications furnished by Buyer. Buyer agrees to notify Seller in writing of any such claim and to provide such assistance as Seller's expense, as may be reasonably required, in defending the action, claim or demand. Seller shall pay all damages, costs and attorney fees awarded or incurred in any such action, claim or demand.

18. If the goods or any component part furnished hereunder are held to infringe and their use is enjoined, Seller shall, at its option and its own expense, (a) procure for Buyer and its successors and assigns, the right to continue using the goods; (b) replace such goods with a substantially equivalent unit

infringing product acceptable to Buyer; or (c) modify such goods so they become non-infringing with substantially equivalent performance acceptable to Buyer. Absent (a), (b), (c), Buyer reserves its rights at law, and at its option may return the infringing goods to Seller at Seller's expense and Seller promptly shall refund the purchase price to Buyer.

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20. All goods furnished hereunder will be subject to Buyer's final inspection and approval within a reasonable time after delivery irrespective of payment date. Buyer may reject goods not in accordance with the instructions, specifications, drawings, data or Seller's express or implied warranties ("Nonconforming Goods") or may accept some and reject other Nonconforming Goods, at its option. All rejected goods shall be held at Seller's risk. Buyer may return rejected goods to Seller at Seller's risk and expense and Buyer shall have no further obligation for such goods. Payment for any goods shall not be deemed acceptance and in no event shall Buyer incur any liability for payment for rejected goods.

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INDEMNITY

23. The Seller agrees to defend, indemnify and save the Buyer harmless against all liabilities, claims or demands whether in tort, in contract or otherwise for injuries or damages to any person or property arising out of Seller's act or omission in the performance of this Purchase Order, including, without limitation, a breach of Seller's warranties contained in paragraph 24.

SELLER WARRANTIES

24. By accepting this Purchase Order, Seller warrants that the goods and services furnished will be free from contamination, defects in materials, design and workmanship, new, non-hazardous and in full conformity with Buyer's specifications, drawings and data, and Seller's descriptions, promises or samples, and that such goods will be fit for the Buyer's intended use. ~~Seller has no obligation to defend and save the Buyer harmless against~~ title to the goods free and clear from all liens, claims and encumbrances. Seller warrants that it shall be able to fulfill all of its obligations under this agreement with no degradation in performance due to the calendar change from 1999 to 2000 and beyond January 1, 2000. These warranties shall survive acceptance of the goods delivered hereunder, and are in addition to any warranties of additional scope given to Buyer by Seller. No implied warranties by the Seller are excluded. All warranties run to both Buyer and its customers.

25. Seller, without cost to Buyer, shall promptly do all things necessary to correct any breach of the above warranties in a manner satisfactory to Buyer. If Seller is unable or refuses to repair or replace as Buyer may require, Buyer may contract or otherwise repair, or replace such defective goods and then charge Seller for the excess cost.

TITLE AND RISK OF LOSS

26. Notwithstanding any other term of this Purchase Order to the contrary, risk of loss of all goods shall remain in Seller until receipt and acceptance of the goods at Buyer's location. Notwithstanding restrictive legends to the contrary, title to plans, drawings and specifications for goods shall be vested and remain with Buyer and may be used by Buyer for any purpose.

27. Notwithstanding any other term of this Purchase Order to the contrary, title shall pass to Buyer upon Buyer's acceptance of goods at Buyer's location. If Buyer makes progress payments, title to the goods shall be transferred to Buyer as payments are made, and in the same proportion as the cumulative payments bear to the order price. Seller shall also identify such goods as the property of Buyer, unless Buyer waives identification in writing.

NONDISCLOSURES

28. If Buyer discloses or grants Seller access to any research, development, technical, economic or other business information or "know-how" of a confidential nature, whether reduced to writing or not, Seller agrees, as a condition of receiving such information or "know-how", that it will not use or disclose any such information to any other person at any time, except as may be necessary in the performance of this order, without Buyer's prior written consent. Seller will use such information only to perform this Purchase Order and it will only disclose such information to those of its officers, directors and responsible employees to whom it will be essential to make such disclosure in order to accomplish the purpose of this Purchase Order.

PROPERTY FURNISHED TO SELLER BY BUYER

29. All special dies, molds, patterns, jigs, fixtures, and any other property which Buyer furnished to Seller or specifically pays for to be used in the performance of this Purchase Order shall be and remain Buyer's property, shall be subject to removal upon Buyer's instruction, shall be for Buyer's exclusive use, shall be held at Seller's risk, and shall be kept insured by Seller at Seller's expense while in its custody or control in an amount equal to the replacement cost, with loss payable to Buyer. Seller will furnish copies of policies or certificates of insurance on Buyer's demand.

RESOLUTION OF CONFLICTS OR INCONSISTENCIES OCCURRING IN THE ORDER

30. It is Seller's responsibility to comply with this Purchase Order and all referenced documents and to clarify with Buyer any inconsistencies or conflicts in any part of this Purchase Order, such as the provisions contained in this document, additional terms and conditions, general specifications, detailed specifications, etc. Should Seller fail to contact Buyer to resolve any such conflicts or inconsistencies, Seller will be solely responsible for errors resulting from conflicts or inconsistencies. Where documents are referenced, the version in effect at the time of order placement shall apply.

31. Acknowledgment of this order, shipment of any goods or rendering of any services pursuant to this order shall be deemed an acceptance of these terms and conditions. No modification or revision of or release from this Purchase Order shall be binding unless agreed to in writing signed by both Buyer and Seller and specifically labeled as a modification or release. These terms and conditions supersede any submitted by Seller in any acceptance, proposal or acknowledgment and Buyer hereby objects to any additional terms contained in such acceptance, proposal or acknowledgment.

WAIVER

32. Buyer's failure to insist on Seller's strict performance of any of the terms and conditions of this Purchase Order at any time shall not be construed as a waiver by Buyer for performance in the future.

cc: Seller/Am/Ad/Pr

AB0000083363



5100 Poplar Avenue • Suite 2414 • Memphis, TN 38137 • (901) 685-5348 • Fax (901) 684-5398

CEDAR INTERNAL CORRESPONDENCE

Date: August 26, 1997

To: Neil Robbins
Bob Christian

From: Randal Tomblin
JRT-20-97

cc: C. McGee
J. Whitsitt
J. Hanna
E. White

Subject: DCA Purchases *JRT*

As we pick up steam on production for Riceco, we will be a net purchaser of DCA from Bayer.

In order to minimize cost to Riceco (freight and import duty) and to Cedar (for DCA shipped to Europe for diuron production on behalf of Cedar or Federssen), please establish necessary tracking procedures to:

- Ensure that the net cost of all DCA purchased or traded from any source is used to calculate the propanil transfer prices to Riceco.
- Ensure that the costs of DCPI and diuron are calculated using Cedar DCA cost regardless of the source of the DCA.
- Do not drum any DCA for shipment unless and until I have been consulted on the matter.

If you have any questions, please call.

Randal



5100 Poplar Avenue • Suite 2414 • Memphis, TN 38137 • (901) 685-5348 • Fax (901) 684-5398

Facsimile Cover Sheet

To: Neil Rokhins
Company: West Helena
Fax No:

From: Randal Tomblin

Date: March 19, 1998

cc:

No. Pages: 1 (including cover)

Neil:

According to Feddersen/ Fowler, it seems we are still short one invoice for 66MT DCA at \$3.30/kg.

Could you please review the shipments over the last six months or so? I'm not sure where we are, but Balint claims we hav not billed all material. Perhaps Julie could help if you need it.

Randal

CONFIDENTIALITY NOTICE

This facsimile transmission is intended for the addressee named above. It may contain information that is privileged, confidential, or otherwise protected from use and disclosure. If you are not the intended recipient, you are hereby notified that any review, disclosure, copying, or dissemination of this transmission, or the taking of any action in reliance on its contents, or other use is strictly forbidden. If you have received this transmission in error, please notify us by telephone immediately so we can arrange for its return to us. Thank you for your cooperation.



5100 Poplar Avenue • Suite 2414 • Memphis, TN 38137 • (901) 685-5348 • Fax (901) 684-5398

CEDAR INTERNAL CORRESPONDENCE

Date: April 4, 1998

File
To: Chris McGee
Geoff Pratt

2 page

From: Randal Tomblin *RT*
JRT-20-98

cc:

Subject: Ethephon

Per the attached, you will see that we will not produce ethephon for Rhone-Poulenc during 1998 (hurrah!!).

As initially thought, A&W's sudden interest in our producing for them again is, indeed, because R-P asked them to try to fill up 4 months. And, of course, our obligation is to work to do so to mitigate any exposure that R-P has to occupy that time. This must, however, be done with complete objectivity, i.e., we should do everything that we can to use the idle time in unit #5, but only if it makes good technical sense. We can not afford to destroy the plant with corrosion, etc. And, if A&W does come in, we must make sure that the project generates a minimum of \$300,000 per month plus raw materials, utilities, etc., hopefully more. If you have any questions, let me know.

Randal

AB0000093090

**SECTEUR AGRO**

14-20, RUE PIERRE BAIZET B.P. 9163
69263 LYON CEDEX 09
TEL. 72.29.25.25 FAX 72.29.21.99
TEL DIRECT (33) (0) 72 85 25 12
FAX DIRECT : (33) (0) 72 85 21 78

CEDAR CHEMICALS Corp.

5100 Poplar Avenue
Suite 2414
MEMPHIS, TN 38137
USA
Attn : Mr. Randal Tomblin

Lyon, le April 2nd, 1998

a/ref.: JP/no-98019

Dear Randal,

Both Hans and myself wish to thank you sincerely for the nice welcome that you extended to us on the occasion of our visit of March 11.

Hans will separately comment, eventually, on the DCA/DCPI and Nitro DZ issues.

As far as Ethephon is concerned, we have carefully reviewed the overall production picture at RPA, and have come to the conclusion that we shall not manufacture at Cedar during this campaign (98). In these conditions, we are seeking any alternative solution to occupy the 4 months of the plant. We recently had a chance to raise the question with Albright & Wilson, who were positive on the principle. Perhaps they have already been in touch with you, please let us know. As agreed between us, you also mentioned that you would simultaneously be looking for other manufacturing businesses ; we hope that you can be successful, and that between yourself, Albright & Wilson, and eventually ourselves, we can occupy the plant for the time it was supposed to work on ethephon.

I trust that the above is well in line with what was discussed during our meeting. We are looking forward to your comments, if any.

Best Regards.

Jean-Pierre CHALMETTE

cc : H. Moser
J. Sorrell
S. Oestraicher / P. Timesz
F. Janasiewicz



5100 Poplar Avenue • Suite 2414 • Memphis, TN 38137 • (901) 685-5348 • Fax (901) 684-5398

CEDAR INTERNAL CORRESPONDENCE

Date: April 4, 1998

To: Chris McGee
Geoff Pratt

2 page

From: Randal Tomblin *RT*
JRT-20-98

cc:

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Randal

*File in
Ethephone
Folder*

**SECTEUR AGRO**

14-20, RUE PIERRE SAUZET B.P. 9163
69263 LYON CEDEX 09
TEL. 72 29 25 28, FAX 72 29 21 99
TELEX 200000 RP (22) 72 85 25 12
FAX DIRECT : (33) (3) 72 85 21 78

CEDAR CHEMICALS Corp.
5100 Poplar Avenue
Suite 2414
MEMPHIS, TN 38137
USA
Attn : Mr. Randal Tamblyn

LYON, 6 April 2nd, 1998

ref.: RP/ao-98019

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I trust that the above is well in line with what was discussed during our meeting. We are looking forward to your comments, if any.

Best Regards.

A handwritten signature in black ink, appearing to be 'JP Chalmette', written over a horizontal line.

Jean-Pierre CHALMETTE

cc : H. Moser
J. Sorrell
S. Oestreicher / P. Timmesz
F. Janasiewicz

.....

CEDAR CHEMICAL
CUSTOM MANUFACTURING
5100 POPLAR AVENUE
SUITE 2414
MEMPHIS, TN 38137

facsimile transmittal

To: Pierre LeRoy

Fax: 334 72/86/2066

Rhone Poulenc Agri

From: Geoffrey L. Pratt

Date: 06/02/98

Re:

Pages: 2

CC: Don Malcolm, Ed White,
Randal Tomblin, Chris
McGeer

☐ For Review

☐ Please
Comment

☐ Please
Reply

☐ Please
Recycle

Dear Pierre:

I hope you received the Nitro DZ process data from Don Malcolm dated May 20, 1998. Please let me know if any clarification of this data is required.

It is our understanding that if you are satisfied that we have the correct basis for the project and our approach appears feasible then approval can be obtained from Rhone Poulenc management so that the project can proceed. At present, we have the project on hold awaiting your input. If approval for the project is received relatively soon and there appears to

CONFIDENTIAL

.....

✓ Jeff need a replacement Alpha Chem & Clean Bottom.

- Jim - need new bottoms filling system & include limitation employee exposure TCAS vapors

✓ DOW
P-P - Nitro-DZ
Pierre Le Roy

Fax: 011-334 72852066

phon: 011-334 7285 ~~2086~~
2600

- Michel
~~Guinard~~ Guinard Jean
de Courre

Tech meeting on July 8th
WHERE?

- process development complete

(-PFD)

30% estimate

- economic



SECTEUR AGRO

14-20 rue Pierre Bellet
69263 LYON Cédex 09 FRANCE

**PROCEDES INDUSTRIELS
- LA DARGOIRE -**

En cas de problème **Claire Djankdossian**
Tel: 04 72/85/2323
Fax: 04 72/85/2066

Date	22/04/98
Expéditeur/From	P. LE ROY/C. DJANKDOSSIAN
Destinataire/To	CEDAR
Attention	GEOFFREY PRATT
Cop.	/
Objet/Re.	
Pages	1

MESSAGE

Dear Mr Pratt,

Further to your phone conversation with P.LE ROY, I inform you
that you can reach him at this address and Phone/Fax numbers :

Att. P. LE ROY
RHONE POULENC AGRO
14/20 rue Pierre Bellet
B.P. 9163
69263 LYON CEDEX 09

Phone : 4-72 85 26 00
Fax : 4-72 85 20 66

Best regards,

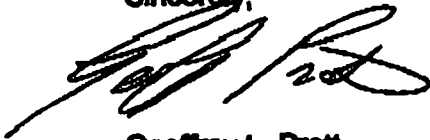
Claire Djankdossian
Assistant to P.LE ROY

Post-it® Fax Note	7871	Date	4/29/98	Page	1
To	Ed White	From	Geoffrey Pratt		
Co/Dept	Cedar Chemical	Co	Cedar Chemical		
Phone #		Phone #	901-684-5373		
Fax #		Fax #			

further engineering definition prior to your visit to our plant in Arkansas,
which was tentatively scheduled for July 8.

We would appreciate your comments and looking forward to seeing you
again.

Sincerely,

A handwritten signature in black ink, appearing to read 'GLP', with a stylized flourish extending from the end.

Geoffrey L. Pratt

GLP/tg

CEDAR CHEMICAL CORPORATION
P. O. BOX 2749, HWY 242 SOUTH
WEST HELENA, ARK 72390
Phone 501-572-3701
Fax 501-572-3795

TO: CEDAR CHEMICAL CORP

FROM: Neil Robbins

ATTN: Ron Fowler

DATE: April 22, 1998

FAX NO: 1-901-684-5398

NO. OF PAGES: 1 of 12

Ron,

In review of the invoices to Feddersen for shipments of DCA I found we invoiced them for the same exact quantity that Bayer invoiced us for.

I also found in our first billing were Trish got Randal's approval to invoice the additional pounds at the \$1.50.

I have enclosed copies of the Bayer invoices for your information.

If you need additional information please advise!

Neil

CC: Randal Tomblin



CEDAR CHEMICAL CORPORATION
SUITE 2414, 5100 POPLAR AVE
MEMPHIS, TN 38137

PHONE 901/685-5348

I N V O I C E E D I T

2/10/98 42607 3/12/98
39463

K. D. FEDDERSEN & CO
UEBERSEEGESELLSCHAFT MBH
GOTENSTRASSE 11 A
P O BOX 1010 20
HAMBURG GERMANY 20007

3475-00

*** SHIPPED COMPLETE ***

K D FEDDERSEN
EXPORT
SAJOBABONY, HUNGARY

07

CEDAR CHEMICAL CORPORATION
P O BOX 2900
DEPARTMENT 161
MEMPHIS, TN 38101-2900

0700-00 3475-00 42607-000 71502

30 F TOMBLIN COLLECT F
NET DUE 30 DAYS

IN TRANSIT SHIPPING POINT TKN

145464
LBS

0020 BSA

0.0

0.0 218.196 00

SHIPMENT NOVEMBER 97

*****6/25/97 UPDATE****

PRICE ADJUSTMENT

SAVES INVOICES 3125009 3125012, 3125014 & 3125015

PAY THIS AMOUNT

218,196.00

AB0000079561

426057

Bayer

REMIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-6662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO:3125009 DATE: 01-09-98 CO-21 DIV-10 DP-0012
EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY 61

DUPLICATE INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #:04-108029
FOB:LEVERKUSEN, GE

ORDER INVOICE NO: 3125009 DATE: 01-09-98
FREIGHT: COLLECT DATE SHIPPED: 01-09-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65384	66 X 551.00 LB DRUM (1751)			

SPECIAL PRICING APPLIES

06Y65384

ITEM	CODE (0005)	TERMS AND CONDITIONS FOR EACH ITEM NET 30 DAYS
------	----------------	---

TOTAL AMOUNT FOR THIS ORDER INVOICE 59,822.07

*** EXPORT SHIPMENT ***

R36-D01-T001-P ---*** CO-21 DIV-10 009404 PAGE 1 LAST PAGE
666 CUSTOMER REQUEST CARR *20CUSE 0175 0175 BAYER CORPORATION

**0032

TERMS AND CONDITIONS: NOTWITHSTANDING ANY CONTRARY OR INCONSISTENT CONDITIONS THAT MAY BE EMBODIED IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
SUBJECT TO THE PRICES, TERMS AND CONDITIONS OF THE MUTUALLY EXECUTED CONTRACT BETWEEN US. OR IF NO SUCH CONTRACT EXISTS YOUR ORDER IS ACCEPTED
SUBJECT TO OUR REGULAR SCHEDULED PRICE AND TERMS IN EFFECT AT TIME OF SHIPMENT AND SUBJECT TO THE TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE
HEREOF

MB258
Rev 1/85

CUSTOMER'S INVOICE

Bayer Corporation, Pittsburgh, PA 15205-8741

AB0000079561

REMIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE

BILL TO: 005761-001

NO:3125012 DATE: 01-09-98 CO-21 DIV-10 DP-0012

EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY 61

DUPLICATE INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #:04-108029
FOB:LEVERKUSEN, GE

ORDER INVOICE NO: 3125012 **DATE: 01-09-98**
FREIGHT: COLLECT **DATE SHIPPED: 01-09-98**

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65385	66 X 551.00 LB DRUM (1751)			

SPECIAL PRICING APPLIES

06Y65385

ITEM	CODE	TERMS AND CONDITIONS FOR EACH ITEM
	(0005)	NET 30 DAYS

TOTAL AMOUNT FOR THIS ORDER INVOICE **59,822.07**

*** EXPORT SHIPMENT ***

R36-D01-T001-P ---*** CO-21 DIV-10 009404 PAGE 1 LAST PAGE
666 CUSTOMER REQUEST CARR *20CUS@ 0175 0175 BAYER CORPORATION

**0033

TERMS AND CONDITIONS: NOTWITHSTANDING ANY CONTRARY OR INCONSISTENT CONDITIONS THAT MAY BE EMBODIED IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
SUBJECT TO THE PRICES, TERMS AND CONDITIONS OF THE MUTUALLY EXECUTED CONTRACT BETWEEN US OR, IF NO SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
SUBJECT TO OUR REGULAR SCHEDULED PRICE AND TERMS IN EFFECT AT TIME OF SHIPMENT AND SUBJECT TO THE TERMS AND CONDITIONS PRINTED ON THE REVERSE
HEREOF

REMIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO:3125014 **DATE: 01-09-98** **CO-21 DIV-10 DP-0012**
EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY **61**

DUPLICATE INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
 REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
 ACCOUNT.

PURCHASE ORDER #:04-108029
FOB:LEVERKUSEN, GE

ORDER INVOICE NO: 3125014 **DATE: 01-09-98**
FREIGHT: COLLECT **DATE SHIPPED: 01-09-98**

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65386	66 X 551.00 LB DRUM (1751)			

SPECIAL PRICING APPLIES

06Y65386

ITEM	CODE	TERMS AND CONDITIONS FOR EACH ITEM
	(0005)	NET 30 DAYS

TOTAL AMOUNT FOR THIS ORDER INVOICE **59,822.07**

*** EXPORT SHIPMENT ***

R36-D01-T001-P **--*** CO-21 DIV-10 009404 PAGE 1 LAST PAGE**
666 CUSTOMER REQUEST CARR *20CUSE 0175 0175 BAYER CORPORATION

****0034**

TERMS AND CONDITIONS: NOTWITHSTANDING ANY CONTRARY OR INCONSISTENT CONDITIONS THAT MAY BE EMBODIED IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
 SUBJECT TO THE PRICES, TERMS AND CONDITIONS OF THE MUTUALLY EXECUTED CONTRACT BETWEEN US, OR, IF NO SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
 SUBJECT TO OUR REGULAR SCHEDULED PRICE AND TERMS IN EFFECT AT TIME OF SHIPMENT AND SUBJECT TO THE TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE
 HEREOF

REMIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE

NO: 3125015

DATE: 01-09-98 CO-21 DIV-10 DP-0012

BILL TO: 005761-001

EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY

61

DUPLICATE INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
 REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
 ACCOUNT

PURCHASE ORDER #: 04-108029

FOB: LEVERKUSEN, GE

ORDER INVOICE NO: 3125015 DATE: 01-09-98

FREIGHT: COLLECT DATE SHIPPED: 01-09-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65387	66 X 551.00 LB DRUM (1751)			

SPECIAL PRICING APPLIES

06Y65387

ITEM CODE TERMS AND CONDITIONS FOR EACH ITEM
(0005) NET 30 DAYS

TOTAL AMOUNT FOR THIS ORDER INVOICE 59,822.07

*** * * EXPORT SHIPMENT * * ***

R36-D01-T001-P --- CO-21 DIV-10 009404 PAGE 1 LAST PAGE**
666 CUSTOMER REQUEST CARR *20CUS@ 0175 0175 BAYER CORPORATION

****0035**

TERMS AND CONDITIONS: NOTWITHSTANDING ANY CONTRARY OR INCONSISTENT CONDITIONS THAT MAY BE EMBODIED IN YOUR PURCHASE ORDER YOUR ORDER IS ACCEPTED
 SUBJECT TO THE PRICES, TERMS AND CONDITIONS OF THE MUTUALLY EXECUTED CONTRACT BETWEEN US, OR IF NO SUCH CONTRACT EXISTS YOUR ORDER IS ACCEPTED
 SUBJECT TO OUR REGULAR SCHEDULED PRICE AND TERMS IN EFFECT AT TIME OF SHIPMENT AND SUBJECT TO THE TERMS AND CONDITIONS PRINTED ON THE REVERSE
 HEREOF

KCCT-011

PRINT DATE 6/25/97 TIME 8:13:45

CEDAR CHEMICAL CORPORATION
MEMPHIS, TN.

ORDER ORDER
DATE NUMBER

*****OFFICE COPY*****

4/23/97 42607

SOLD TO:

K. D. FEDDERSEN & CO.
UEBERSEEGESELLSCHAFT MBH
GOTENSTRASSE 11 A
P.O. BOX 10 10 20
HAMBURG GERMANY 20007

SHIP TO

K.D. FEDDERSEN
EXPORT
SAJOBABONY, HUNGARY

CHANGE ORDER

00000-0000

REQUESTED	CUST. NO.	CUST. ORDER NO.	SALESMAN	FRT.PPD/COL
4/23/97	3475-00	715027	J. WHITSITT	PREPAID

SHIPPED FROM	FOB POINT	SHIP VIA	TERMS
WEST HELENA PLANT	SHIPPING POINT TRK		NET DUE 30 DAYS

QTY	CONTAINER	ITEM	UNIT	BILLING	EXTENDED
ORDERED	SIZE	NUMBER DESCRIPTION	PRICE	UNIT	SALE PRICE

145200	LBS	3020 DCA	BULK	LBS	217,800.00
--------	-----	----------	------	-----	------------

145464

I SHIPMENT: NOVEMBER 97
I *****6/25/97 UPDATE*****
I PRICE ADJUSTMENT.

TOTAL ORDER AMOUNT 217,800.00

Handwritten: \$218,190

Handwritten: *Germany
Bayer
Jan 98

PHONE: 901/685-5348

CEDAR CHEMICAL CORPORATION
SUITE 2414, 5100 POPLAR AVE.
MEMPHIS, TN 38137

I N V O I C E E D I T

3/19/98 42608 4/18/98

39669

K. D. FEDDERSEN & CO.
UEBERSEEGESELLSCHAFT MBH
GOTENSTRASSE 11 A
P O BOX 10 10 20
HAMBURG GERMANY 20007

3475-00

*** SHIPPED COMPLETE ***

K D. FEDDERSEN
EXPORT
SAJOBABONY, HUNGARY

05

CEDAR CHEMICAL CORPORATION
P.O. BOX 2900
DEPARTMENT 161
MEMPHIS, TN 38101-2900

0/00/00 3475-00 42608-000 715028 30 R. TOMBLIN COLLECT P/C
97 IN TRANSIT SHIPPING POINT TRK NET DUE 30 DAYS

45464 3020 DCA BULK LBS 218,196.00
LBS

E 66,000 KGS X \$3.30 = \$217,800.00
I SHIPMENT, DECEMBER 97
I DOCUMENT REQ'D. CERT. OF ANALYSIS
I *****6/25/97 UPDATE*****
I PRICE ADJUSTMENT
I BAYER INVOICES: 3125016, 3125017, 3125018 & 3125019

PAY THIS AMOUNT 218,196.00

AB0000079561

42608

Bayer 

West Helena, Ariz. Dec.

REMIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

RECEIVED
FEB 17 1998
RECEIVED

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE

BILL TO: 005761-001

NO: 3125016 DATE: 02-06-98 CO-21 DIV-10 DP-0012

EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY 61

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT.

PURCHASE ORDER #: 04-108029
FOB: LEVERKUSEN, GE

ORDER INVOICE NO: 3125016 DATE: 02-06-98
FREIGHT: COLLECT DATE SHIPPED: 01-30-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65388	66 X	551.00 LB	DRUM (1751)	

SPECIAL PRICING APPLIES

06Y65388

FORM CODE

TERMS AND CONDITIONS FOR EACH ITEM

VENDOR #		INVOICE #	
2987		3125016	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
108029		1	020698
TERMS CODE	DUE DATE	FRY. BILL CD	SALES ORDER #
5			
INVOICE AMT.		DISC. ALLOWED	
59,822.07			
GL NUMBER	AMOUNT	WORK ORDER #	
0153 5910	59,822.07		
DONE BY	DATE	APPROVED BY	ENTERED BY

59,822.07

LAST PAGE
RPORTATION

**0024

IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS. YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

AB0000079561

REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3125017 DATE: 02-06-98 CO-21 DIV-10 DP-0012
EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

West Helena Acct Dept

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY 61

RECEIVE
FEB 17 1998
RECEIVE

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT.

PURCHASE ORDER #: 04-108029
FOB: LEVERKUSEN, GE

ORDER INVOICE NO: 3125017 DATE: 02-06-98
FREIGHT: COLLECT DATE SHIPPED: 02-03-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65389	66 X 551.00 LB DRUM (1751)			

SPECIAL PRICING APPLIES

06Y65389

TERMS AND CONDITIONS FOR EACH ITEM

VENDOR #		INVOICE #	
2987		3125017	
P.O. #	REC. RPT. #	INV. CO	INV. DATE
108029		1	020698
TERMS CODE	DUE DATE	FRY. BILL CO	SALES ORDER #
3			
INVOICE AMT.		DISC. ALLOWED	
59,822.07			
GL NUMBER	AMOUNT	WORK ORDER #	
01535910	59,822.07		
DONE BY		ENTERED BY	
RK			
DATE		APPROVED BY	
2-28-98			

59,822.07

LAST PAGE
RPORTATION

**0025

IF IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

orporation, Pittsburgh, PA 15205-9741
AB0000079561



REMIT TO:

BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE

BILL TO: 005761-001

NO: 3125018

DATE: 02-06-98 CO-21 DIV-10 DP-0012

EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

West Helena Acc: Debi

RECEIVE
FEB 17 1998
RECEIVE

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY

61

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT.

PURCHASE ORDER #: 04-108029
FOB: LEVERKUSEN, GE

ORDER INVOICE NO: 3125018 DATE: 02-06-98
FREIGHT: COLLECT DATE SHIPPED: 02-03-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65390	66 X 551.00 LB DRUM (1751)			

SPECIAL PRICING APPLIES

06Y65390

ITEM CODE

VENDOR #		INVOICE #	
2987		3125018	
P.O. #	REC. RPT. #	INV. CD	INV. DATE
108029		1	020698
TERMS CODE	DUE DATE	FRT. BILL CD	SALES ORDER #
3			
INVOICE AMT.		DISC. ALLOWED	
59,822.07			
GL NUMBER	AMOUNT		WORK ORDER #
C 153 3910	59,822.07		
DONE BY		DATE	APPROVED BY
24		2.29.98	CTN
ENTERED BY			

59,822.07

LAST PAGE
CORPORATION

**0026

IN YOUR PURCHASE ORDER, YOUR ORDER IS ACCEPTED
O SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
ERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Corporation, Pittsburgh PA 15205-0711

AB0000079561



REMIT TO:
BAYER CORPORATION
P.O. BOX 75662
CHARLOTTE, NC 28275-5662

RECEIVED
FEB 17 1998

FIBERS ORGANICS AND RUBBER DIV
100 BAYER ROAD
PITTSBURGH, PA. 15205

ORDER INVOICE
BILL TO: 005761-001

NO: 3125019 DATE: 02-06-98 CO-21 DIV-10 DP-0012
EXPORT SHIP TO: 037539-001-009404

CEDAR CHEMICAL CORP
P.O. BOX 2749
W HELENA AR 72390

CEDAR CHEMICAL CORP
C/O INTERSEAPORT SERVICE
BREMERHAVEN
GERMANY **61**

INVOICE

PLEASE RETURN THE "DUPLICATE INVOICE" COPY WITH
REMITTANCE TO INSURE PROPER PAYMENT IS APPLIED TO YOUR
ACCOUNT

PURCHASE ORDER #:04-108029
FOB:LEVERKUSEN, GE

ORDER INVOICE NO: 3125019 DATE: 02-06-98
FREIGHT: COLLECT DATE SHIPPED: 02-04-98

ITEM	CODES	DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
01	N826	3,4-DICHLOROANILINE, PURE	36,366.00	1.64500	59,822.07
080081	06Y65391	66 X	551.00 LB	DRUM (1751)	

SPECIAL PRICING APPLIES

06Y65391

*****Y65391*****

TERMS AND CONDITIONS FOR EACH ITEM

VENDOR #			INVOICE #		
2987			3125019		
P.O. #		REC RPT. #		INV. CD	
108029				1	
TERMS CODE		DUE DATE		FRT. BILL CD	
3					
INVOICE AMT.			DISC. ALLOWED		
59,822.07					
GL NUMBER			AMOUNT		WORK ORDER #
C	153	5910	59,822.07		
DONE BY		DATE		APPROVED BY	
			ENTERED BY		

59,822.07

**LAST PAGE
REPRODUCTION**

****0027**

ED IN YOUR PURCHASE ORDER. YOUR ORDER IS ACCEPTED
NO SUCH CONTRACT EXISTS, YOUR ORDER IS ACCEPTED
TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE

Organization Pittsburgh PA 15205-8744 AB000007956

COMMUNICATION RESULT REPORT

501 572 3795

CEDAR CHEMICAL CORP.

04-22-98 06:51AM

FILE	DATE & TIME	FILE TYPE	DELAYED	DESTINATION/TO:/FROM:	PAGE	REMARKS	SIZE
26	04-22 06:42AM	MEMORY-S		TO : CEDAR EXTRA	04		0126

NO.	PHONE / TTI NO.	COMM MODE	RESULT	NO.	PHONE / TTI NO.	COMM MODE	RESULT
001	050: CEDAR EXTRA		GOOD				

CEDAR CHEMICAL CORPORATION
 P. O. BOX 2749, HWY 242 SOUTH
 WEST HELENA, ARK 72390
 Phone 501-572-3701
 Fax 501-572-3795

TO: CEDAR CHEMICAL CORP

FROM: Neil Robbins

ATTN: Ron Fowler

DATE: April 22, 1998

FAX NO: 1-901-684-5398

NO. OF PAGES: 1 of 12

 Ron,

In review of the invoices to Padderson for shipments of DCN I found we invoiced them for the same exact quantity that Bayer invoiced us for.

I also found in our first billing were Trish got Randal's approval to invoice the additional pounds at the \$1.50.

I have enclosed copies of the Bayer invoices for your information.

If you need additional information please advise!

Neil

CC: Randal Tomblin



COMMUNICATION RESULT REPORT

501 572 3795

CEDAR CHEMICAL CORP.

04-22-98 06:48AM

FILE	DATE & TIME	FILE TYPE	DELAYED	DESTINATION/TO:/FROM:	PAGE	REMARKS	SIZE
41	04-22 06:41AM	MEMORY-S		TO : CEDAR MEMPHIS	12		0343

NO.	PHONE / TTI NO.	COMM MODE	RESULT	NO.	PHONE / TTI NO.	COMM MODE	RESULT
001	001: CEDAR MEMPHIS		GOOD				

CEDAR CHEMICAL CORPORATION
 P. O. BOX 2749, HWY 242 SOUTH
 WEST HELENA, ARK 72390
 Phone 501-572-3701
 Fax 501-572-3795

TO: CEDAR CHEMICAL CORP

FROM: Neil Robbins

ATTN: Ron Fowler

DATE: April 22, 1998

FAX NO: 1-901-684-5398

NO. OF PAGES: 1 of 12

 Ron,

In review of the invoices to Faddersen for shipments of DCA I found we invoiced them for the same exact quantity that Bayer invoiced us for.

I also found in our first billing were Trish got Randal's approval to invoice the additional pounds at the \$1.50.

I have enclosed copies of the Bayer invoices for your information.

If you need additional information please advise!

Neil

CC: Randal Tomblin .

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Cedar Chemical Corp.
5100 Poplar Ave
Memphis, Tn 38138

To: Neil Robbins
Company:
Fax number: +1 (870) 572-3795
Business phone:

From: Ron Fowler
Fax number: +1 (901) 684-5384
Business phone: 901-684-5384
Home phone: 901-758-2265

Date & Time: 4/21/98 2:49:13 PM
Pages: 2
Re: Feddersen

Cedar Chemical Corp.
Offset of Feddersen Invoices

Invoices due Cedar from Feddersen Inv. #	<u>Per Cedar</u>	<u>Per Feddersen</u>
39463	218,196.00	217,800.00
39869	218,196.00	217,800.00
	<u>436,392.00</u>	<u>435,600.00</u>
 Invoices due Feddersen from Cedar		
215205	311,384.80	311,384.80
47009	19,250.00	19,250.00
215702	261,160.20	261,160.20
	<u>591,775.00</u>	<u>591,775.00</u>
 Net Due Feddersen	<u><u>(155,383.00)</u></u>	<u><u>(156,175.00)</u></u>
 Diff	<u><u>(792.00)</u></u>	

1 901 684 5384

04-21-98 01:50PM P002 #45

K. D. Feddersen & Co Ueberseegesellschaft

POB 10 10 20 * D-20007 Hamburg / Gotenstr. 11A * D-20097 Hamburg

Telefon: 040 / 23507-01 * Telefax: 040 / 23507-450 * Telex: 2163481 kdfu d



TO CEDAR CHEMICAL CORP.
ATT.:MR R. TOMBLIN
AND MR R. FOWLER

YOUR DCA INVOICE NO.:39669, DATED 3.19.98

IN ACC. TO FACTORY REPORT 66000 KGS DCA ARRIVED (4X16500KGS)
TO SAJOBABONY ON 5 AND 6.2.1998.
PRICE OF THE PRODUCT IS USD 3,30/KG CIF, WHICH MEANS A TOTAL
SUM OF USD 217800.- AND NOT AS PER YOUR INV. 218196.-
(MOST PROBABLY SOME DIFFR. BETWEEN KG/LB.)

WE WILL CONSIDER USD 217800.- AGAINST YOUR INV.39669.

OUR INVOICE NO. 215205 AND DEBIT NOTE NO.47009 STILL SHOWS
AN OUTSTANDING SUM OF 112814,80, AS PER AGREEMENT WITH MR FOWLER
ON 11.2.98, WE DEDUCT THIS SUM FROM YOUR INVOICE AND TRANSFER AGAINST YOUR
INVOICE NO.39669 USD 104985,20.

BEST REGARDS
K. BALINT

TRISH,
PLEASE PULL
THE INVOICE AND
BACK UP FOR ME.
THANK
NEIL

COMMUNICATION RESULT REPORT

501 572 3795

CEDAR CHEMICAL CORP.

04-22-98 08:38AM

FILE	DATE & TIME	FILE TYPE	DELAYED	DESTINATION/TO:/FROM:	PAGE	REMARKS	SIZE
16	04-22 08:31AM	MEMORY-S		TO : CEDAR MEMPHIS	12		0342

NO.	PHONE / TTI NO.	COMM MODE	RESULT	NO.	PHONE / TTI NO.	COMM MODE	RESULT
001	001: CEDAR MEMPHIS		GOOD				

CEDAR CHEMICAL CORPORATION
P. O. BOX 2749, HWY 242 SOUTH
WEST HELENA, ARK 72390
Phone 501-572-3701
Fax 501-572-3795

TO: CEDAR CHEMICAL CORP

FROM: Neil Robbins

ATTN: Ron Fowler

DATE: April 22, 1998

FAX NO: 1-901-684-5398

NO. OF PAGES: 1 of 12

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Neil

CC: Randal Tomblin



		CEDAR WEST HELENA					CC:	C McGEE		R Fairchild		Fda Copy				
		PROPANE PRODUCTION AND USAGE						G Satherfield		P Fields						
		AS OF	Apr-89					B Christian		Mo Book						
FINISH GOODS INFO																
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Y-T-D	#B or Gal	Std
DCA		1,008,108	1,057,745	1,010,116	1,388,929									4,462,898		
	ODCB	1,138,109	1,120,877	1,291,878	1,648,398									5,198,282	1.1848	1.1300
	Nitric Acid	482,059	474,861	542,539	728,642									2,238,101	0.5017	0.4970
	Sulfuric Acid	971,379	911,899	1,050,090	1,378,999									4,313,367	0.8885	0.8550
	Plat/Carb Cata	282	255	287	381									1,195	0.0003	0.0003
	Hydrogen	51,718	48,926	58,409	72,941									231,994	0.0520	0.0510
	Soda Ash	12,016	2,608	10,876	9,454									35,954	0.0079	0.0110
	Lime	37,600	23,400	27,400	33,600									122,000	0.0273	0.0306
	Caustic 50%	78,386	47,210	29,724	48,095									198,415	0.0445	0.0182
	Hydr Peroxide	8,000	1,000	4,000	7,500									20,500	0.0048	0.0050
	Methanol	1142												1,142	0.0003	
	TEPA	681	853	633	348									2,413	0.0006	0.0006
	Ferrous Sulfate	138	50	125	213									526	0.0001	0.0001
Propanol Tech		1,088,110	1,496,470	1,388,885	1,500,572									5,472,887		
	DCA	834,620	1,127,820	1,011,663	1,151,322									4,125,225	0.7638	0.7650
	P. Acid	455,484	613,328	588,309	844,465									2,278,584	0.4185	0.3707
	P. Anty.	2,110	992		1,081									4,183	0.0008	0.0150
Flaked Tech		105,000	48,500	22,500	369,000									543,000		
	P. Tech	105,000	48,500	22,500	369,000									543,000	1.0000	1.0000
3rd Bulk		28,843			26,680									47,525		
	P. Tech	63,230			88,853									150,083	3.1580	3.2180
	Isoph	40,200			59,219									99,419	2.0819	2.2500
	MO															
	Emul															0.0143
	Aromatic B	39,628			48,377									88,005	1.8518	1.8120
	Armud	28,080			35,879									61,759	1.2895	1.2683
	Sun Oil	6,680			11,890									20,570	0.4326	0.4300
	Tenn 500															
4th Bulk		20,300	99,488	134,633	32,676									286,897		
	P. Tech	84,040	414,605	539,255	135,605									1,173,505	4.0888	4.1500
	Isoph	15,020	78,687	101,637	24,308									217,750	0.7587	0.7500
	MO	60,100	298,590	390,039	97,087									845,816	2.9471	2.7400
	Emul	18,680	87,604	128,365	30,225									273,874	0.9543	0.9250
	Aromatic B															
	Armud															
	Isoph/Mibk															
4th X Bulk		40,877												40,877		
	P. Tech	168,940												168,940	4.1329	4.1270
	MO	67,800												67,800	1.6537	1.7820
	Isoph	67,600												67,600	1.6537	1.6880
	Emul	33,619												33,619	0.8224	0.7820
	Sun Oil	16,400												16,400	0.4012	0.3041
	Aromatic B															0.0503
	Armud	7,200												7,200	0.1781	0.3944
Stam Bulk		75,631	178,838	87,198	103,924									456,591		
	P. Tech	218,185	753,350	405,130	428,894									1,908,589	4.1787	4.1270
	Isoph/Mibk	280,720	683,130	383,141	406,273									1,776,204	3.8880	3.8280
	Emul	67,780	180,945	88,740	93,643									409,308	0.8984	0.9030
	Isoph		250											250	0.0006	
	MO															
Gluron-Days			14	31	30									75		
	Standard Grade		131,400	259,200	183,681									574,281		
	B Grade															
	DCPI		118,900	214,600	143,800									477,300	0.6312	0.6340
	DMA		28,520	63,380	35,615									118,725	0.2067	0.2100
	Naptane		4,958	12,231	6,104									23,301	0.0406	0.0716
	Sulfuric Acid															
	50% Rayon Caustic															

FRESHED GOODS MFG CONT'D															Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Y-T-D	# of Gal	Std
TA-Days																													
	Prod																												
	Nitromethane																										0.7600		
	Formaldehyde																										2.5000		
	Methanol																										0.2480		
	Sulfuric Acid																										0.0860		
	Raney Nickel																										0.0110		
	Hydrogen																										0.1420		
	50% Caustic																										0.1000		
Wham	Prod	100,600	8,370	50,100	102,709																				261,978				
	Flake Tech	180,000	204,000	216,000	522,000																				1,122,000	4.2628	4.1240		
	Morwet	7,750	9,400	9,000	21,690																						47,640	0.1828	0.0970
	Polyton O	210	238	252	609																						1,308	0.0050	0.0100
	Glycerine	10,500	11,900	12,600	30,450																						65,450	0.2498	0.2430
	Allono																										0.3890		
	Kelzan	390	442	468	1,131																						2,431	0.0093	0.0050
	Voegum	8,340	9,490	10,080	24,050																						51,980	0.1989	0.1170
	Aniloxon OC 1500	320	382	372	899																						1,963	0.0075	0.0010
	Technical Carbaryl	300	340		670																						1,510	0.0058	0.0070
	Ethaphon	200	227	240	580																						1,247	0.0048	0.0040
	Soprophor 4D384	18,680	22,304	23,616	57,072																						122,672	0.4683	0.1460
	Proxal	1,203	2,655	1,476																							5,334	0.0204	
	Formaldehyde	58	284	368																							708	0.0027	
Dust	Citric Acid																												
	Prod			138,600	62,520																						201,120		
	Flake Tech			457,500	329,400																						786,900	3.0037	4.1240
	Voegum			21,000	15,120																						36,120	0.1379	0.1170
	Glycerine			27,000	19,440																						46,440	0.1773	0.2430
	Soprophor 4D384			49,500	35,640																						85,140	0.3250	0.1460
	Morwet			18,750	13,500																						32,250	0.1231	0.0970
	Polyton O			525	378																						903	0.0034	0.0100
	Ethaphon			500	360																						860	0.0033	0.0400
	Proxal			3,075	3,913																						6,988	0.0267	
	Formaldehyde			735	675																						1,410	0.0054	
	Aniloxon			775	558																						1,333	0.0051	0.0010
	Benzothuron			3,525	2,538																						6,063	0.0231	
	Kelzan			975	702																						1,677	0.0064	0.0050
Butox 175	Prod				18,691																						18,691		
	2-4 D-B Acid				35,715																						35,715	1.9108	1.8000
	DMA				16,845																						16,845	0.8905	0.8000
	Citric Acid				4,965																						4,965	0.2658	0.2800
Butox 200	Prod	10,840	1,680																								12,500		
	2-4 D-B Acid	23,060	3,680																								26,940	2.1552	2.0800
	DMA	12,540	2,010																								14,550	1.1840	1.1000
	Citric Acid	4,985	760																								5,425	0.4340	0.4200
FINISH GOODS PKG (Number Containers)															Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Y-T-D	Total	Grand
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Containers	Gals/Lbs	Total													
	Prop 360 35 g													-	-														
	Prop 360 200L													-	-														
	Prop 360 210L													-	-														
	Supernox 360 200L													-	-														
	3# 20L				4,873									4,873	25,729														
	3# 50L													-	-														
	3# 200L													-	-														
	3# 55L	379												379	20,845	46,674													
	4# 20L													-	-														
	4# 35		3,526	3,778										7,302	255,570														
	4# 200L	529												529	27,952														
	4# 210L													-	-														
	4# 55	225	(14)											211	11,605														
	Supernox 480 200L													-	-														
	Propanex 4# 35													-	-														
	Propanex 500 55 g													-	-	295,127													
	Sum 35	1,337	3,637	3,585	2,918									11,357	397,495	397,495													
	Them 25 g													-	-														

FRESH GOODS PKG (Number Containers)														Y-T-D	Total	Grand
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Containers	Gals/Lbs	Total	
Pure Tromethamine 2													-			
Trometamol 25 Kg													-			
Trometamol 60 Kg													-			
Tris Ultra Pure 100Kg													-			
Pure Trish Mcl 100 Kg													-			
Wham Bulk				17,359									17,369	17,359		
Wham 2x2 5													-			
Wham 5													-			
Wham 100 L													-			
Wham 30													-			
Super Wham 2x2.5													-			
Super Wham 30	3,360	279	1,670	2,845									6,154	244,820	261,979	
Quat 30			4,620	2,084									6,704	201,120	201,120	
Sancti 200L													-			
175 4x1				2,029									2,029	8,118		
175 2x2.5				2,115									2,115	10,578		
175 55													-		18,691	
200 4x1													-			
200 2x2.5	2,168	332											2,500	12,500		
200 55													-		12,500	
Flaked Tech 25 Kg	1,122	1,240	1,120	1,360									4,842	268,794	268,794	
Duron Col 248 Kg													-			
Duron Col 224 Kg													-			
Butoxone 7500 10x2.33													-			
CUSTOM MFG																
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Containers	Gals/Lbs	Total	
AcidBuorten-Days	15	28	21	30									94			
Prod 100% AI	96,014	143,900	151,181	151,628									542,723			
Mixed Acid	69,987												69,987	0 1289		
Peridone D				44,940									44,940	0 0828		
Sulfuric Acid		22,888	18,170	22,310									63,365	0 1168	0 2400	
Nitro Acid		43,808	37,056	47,074									127,938	0 2357	0 2600	
Acetic Anhydride	62,070	123,856	106,704	120,842									403,371	0 7432	0 7200	
PCE		94,940											94,940	0 1749	0 1200	
Ethylene Dichloride													-			
50% Caustic	182,938	166,332	156,872	187,976									684,116	1 2790	1 2000	
R118118	245,500	480,000	432,000	520,000									1,677,500	3 0909	3 5400	
BFG-Days																
Production													-			
CYMP-Days																
	4												4			
Prod 100% AI	4,230												4,230			
DICHL	7,330												7,330	0 0135		
IPA	10,670												10,670	0 0187		
50% Caustic	5,123												5,123	0 0094		
Catalyst	28												28	0 0001		
Hydrogen	174												174	0 0000		
HCL	10												10	0 0000		
Dover Phos-Days																
		6	29	30									65			
Production			9,460	28,720									38,180			
Phenol		8,400	38,525	40,435									82,360	0 1518		
Caustic		20	140	160									320	0 0006		
TTP		7,600	75,532	64,421									147,783	0 2722		
PE		1,585	13,948	14,070									28,613	0 0548		
DCP		10,576	79,578	83,383									173,536	0 3198		
Xylene		50,980	96,980										147,960	0 2728		
Methanol		51,720											51,720	0 0853		
Phenol2													-			
Ethephon-Days																
Prod 100% AI													-			
Ethylene Oxide													-		1 198	
Phosphorus Trichloride													-		1 242	
Anhydrous Hydr Chloride													-		0 660	
Sulfuric Acid													-			
50% Caustic													-		1 189	

CUSTOM MPG	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Containers	Gals/Lbs	Total
PISC 6-40lbs-Days	31	28	31	30									120		
Prod 100% AI	21,781	18,705	28,822	34,017									103,325		
Step 3	127,863	89,421	168,148	168,104									651,538	5 3379	5.920
Step 4															1 038
Step 5															1 000
Calcium Chloride															
Chlorine	13,717	8,260	11,910	12,091									45,978	0 4450	0 170
Aluminum Sulfate	34,347	25,049	38,178	50,470									148,044	1 4134	1 530
G Acid	14,559	5,852	5,842	15,314									41,387	0 4004	0 900
50% Caustic	7,668	9,280	27,272	25,000									69,220	0 6639	1 920
20% Oleum	108,439	81,999	40,309	148,504									378,251	3 6705	5 160
Methanol	21,458	23,340	12,741	32,502									90,039	0 8714	4 680
Soda Ash	4,900	3,700	3,650	6,000									18,250	0 1768	0 180
Toluene	110,448	114,324	80,155	138,049									452,976	4 3940	4 570
99% Sulfuric Acid				61,200									61,200	0 5923	0 010
Mixed Acid	7,661	5,774	8,455	11,820									31,610	0 3059	0 410

Item No	Std Factor	Usage Factor	Raw Materials Used	Finish Goods			Dr	Cr
				Used	Pkg'd	Mfg'd		
ICA	3020					1,388,929	S 701 1420 1,418,707 58	C 153 6740 (1,418,707 58)
XDCB	41000	1 1300	1 1875	1,849,398			C 153 5520 610,277 28	S 703 1460 (610,277 28)
Itinc Acid	41020	4970	0 5253	729,642			C 153 5540 116,742 72	S 705 1460 (116,742 72)
Ituric Acid	41010	8550	0 8936	1,379,999			C 153 5530 55,199 86	S 704 1460 (55,199 86)
Itat/Carb Cat	41070	0003	0 0003	381				S 711 1460 (32,766 00)
Hydrogen	41030	0510	0 0525	72,941			C 153 5570 87,529 20	S 706 1460 (87,529 20)
Itoda Ash	41050	0110	0 0068	9,454			C 153 5850 42,744 82	S 708 1460 (1,229 02)
Ime	41060	0305	0 0242	33,600				S 709 1460 (2,352 00)
10% Rayon Caustic	45080	0182	0 0346	48,095				S 792 1460 (3,847 60)
Hydrogen Peroxide	41090	0030	0 0054	7,500				S 790 1460 (2,550 00)
Methanol	42640							S 735 1460
IEPA		0006	0 0002	346				
Itenuous Sulfate		0001	0 0002	213				
Itopanol Tech	3000					1,500,572	S 702 1420 1,515,577 72	C 154 6740 (1,515,577 72)
ICA-3rd Party	40100	0 7550					C 154 5630	S 710 1460
ICA-Cedar	3020	0 7550	0 7673		1,151,322		C 154 6840 1,174,348 44	S 701 1420 (1,174,348 44)
2 Acid	40200	0 3707	0 4295	644,465			C 154 5640 180,450 20	S 712 1460 (180,450 20)
2 Anhy	40300	0 0150	0 0007	1,081			C 154 5650 994 52	S 714 1460 (994 52)
Flaked Tech	3050					369,000	S 804 1420 387,450 00	C 155 6740 (387,450 00)
P Tech	3000	1 000	1 000		369,000		C 155 6810 372,690 00	S 702 1420 (372,690 00)
It	3200					28,680	S 802 1420 163,014 80	C 161 6740 (163,014 80)
P Tech	3000	3 2159	3 2554		86,653		C 161 6810 87,721 53	S 702 1420 (87,721 53)
Itaph	40500	2 2500	2 2186	59,219			C 161 5680 33,162 64	S 717 1460 (33,162 64)
MO	40400						C 161 5660	S 716 1460
Emul	40600	0 0143					C 161 5670	S 718 1460
Aromatic B	40800	1 8120	1 8132	48,377			C 161 5685 7,256 59	S 719 1460 (7,256 55)
Annul	40900	1 2683	1 3373	35,679			C 161 5675 27,118 04	S 720 1460 (27,118 04)
Sun Oil	41640	0 4300	0 4457	11,890			C 161 5650 1,902 40	S 769 1460 (1,902 40)
Tenneco 500	45320						C 161 5685	S 797 1460
Cone Blend								
Stepfac								
It	3300					32,678	S 817 1420 228,405 24	C 162 6740 (228,405 24)
P Tech	3000	4 1500	4 1500		135,606		C 162 6810 136,981 05	S 702 1420 (136,981 05)
F Tech	3050						C 162 6835	S 804 1420
Itaph	40500	0 7200	0 7438	24,306			C 162 5680 13,611 36	S 717 1460 (13,611 36)
MO	40400	2 7400	2 9712	87,087			C 162 5660 57,281 33	S 716 1460 (57,281 33)
Emul	40600	0 8250	0 8250	30,225			C 162 5670 21,157 50	S 718 1460 (21,157 50)
Itaph/Itabk	41080						C 162 5780	S 721 1460
Aromatic B	40800						C 162 5685	S 719 1460
Annul	40900						C 162 5675	S 720 1460
It X	3300						S 817 1420	C 162 6740
P Tech	3000	4 1270					C 162 6810	S 702 1420
MO	40400	1 7620					C 162 5680	S 716 1460
Itaph	40500	1 8880					C 162 5680	S 717 1460
Emul	40600	0 7820					C 162 5670	S 718 1460
Aromatic B	40800	0 0503					C 162 5685	S 719 1460
Annul	40900	0 3944					C 162 5675	S 720 1460
Sun Oil	41640	0 3041					C 162 5650	S 769 1460
Stam	3400					103,924	S 811 1420 759,684 44	C 170 6740 (759,684 44)
P Tech	3000	4 1270	4 1270		428,894		C 170 6810 433,182 94	S 702 1420 (433,182 94)
F Tech	3050						C 170 6835	S 804 1420
Itaph/Itabk	41080	3 9280	3 9280	408,213			C 170 5780 212,270 78	S 721 1460 (212,270 78)
Emul	40600	0 9030	0 9030	93,643			C 170 5670 65,690 10	S 716 1460 (65,690 10)
Itaph	40500						C 170 5680	S 717 1460
MO	40400						C 170 5660	S 716 1460

Acetfluorfen Prod'n:					F/G Prod							3 of 18	
Item No	Std	Act	R/M Used		151,628	100% AI							
Aciftorfen	5120						C	182	5850	75,712 24	S	806	1460
Mixed Nitrating Acid	41700										S	828	1460
Perkone D	41740	0 1200	0.2964	44,840							S	807	1460
Acetic Anhydride	41710	0 7200	0 7856	120,642							S	704	1460
Sulfuric Acid	41010	0.2400	0 1471	22,310			C	182	5530	892 40	S	705	1460
Nitric Acid	41020	0 2600	0 3105	47,074			C	182	5540	7,531 84	S		
PCE		0.3220											
Ethylene Dichloride	41720										S	808	1460
50% Caustic	41530	1 2000	1 2397	187,976							S	763	1460
Rock Salt	45350										S	801	1460
R118118	90200	3 5400	3.4294	520,000									
TA Prod'n:					F/G Prod								
Item No	Std	Act	R/M Used										
TA Prod'n:	17000						S	849	1420		C	183	6740
Nitromethane	42680	7600					C	183	5580		S	787	1460
Formaldehyde	41540	2 5000					C	183	5590		S	764	1460
Methanol	42640	2460					C	183	5850		S	735	1460
Sulfuric Acid	41520	0660									S	762	1460
Raney Nickel	42690	0110					C	183	5600		S	788	1460
Hydrogen	41030	1420					C	183	5570		S	706	1460
50% Caustic	41530	1000									S	762	1460
FMC 5-Nitro Prod'd:					F/G Prod								
Item No	Std	Act	R/M Used		34,017	100% AI							
5-Nitro	5290												
Step 3	90800		4 9418	168,104									
Step 4	90810												
Step 5	90820												
Calcium Chloride	90830												
Chlorine	90720		0 3554	12,091									
A Sulfate	90710		1.4837	50,470									
G Acid	90700		0 4502	15,314									
50% Caustic	45080		0 7349	25,000			S	8000	1230	2,000 00	S	792	1460
20% Oleum	90770		4 3858	148,504									
Methanol	90790		0 8555	32,502									
Soda Ash	90740		0 1764	6,000									
Toluene	90760		4.0582	138,049									
93% Sulfuric Acid	90750		1 7991	61,200									
Mixed Acid	90730		0.3475	11,820									
CYMP Prod'd:					F/G Prod								
Item No	Std	Act	R/M Used										
CYMP	5110					100% AI							
DICNIL	90840												
IPA	90850												
50% Caustic	41530						S	9000	1230		S	763	1460
Catalyst	90870												
Hydrogen	41030						C	190	5570		S	706	1460
Hcl	90860												
DoverPhos Prod'd:					F/G Prod								
Item No	Std	Act	R/M Used		28,720								
DoverPhos	5150												
Therminol	90900												
TTP	90910			64,421									
2,4 DCP	90920			83,383									
Methanol	90930												
Xylene	90940												
PE	90950			14,070									
Phenol	90960			40,435									
Caustic	90970			160									
Packaged Plant:													
Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs							
Pure Trom 25 Kg Pkg'd	17120						C	183	6740		S	843	1420
Tromethamine Bulk Used	17000						C	183	6860		S	849	1420
Trometamol 25 Kg	17220						S	845	1420		C	181	6740
Trometamol 50 Kg	17240						C	181	6740		S	847	1420
Tris Ultra Pure 100Kg	17250						C	181	6740		S	853	1420
Pure Tris-Hcl 100Kg	17260						C	181	6740		S	855	1420
Tromethamine Bulk Used	17000						C	181	6860		S	849	1420

Butex 175 Packaged:

Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs
Butoxone 175 4x1	15260				2,029	8,116
Butox 200 Bulk Used	15200	0 8152				
2 4, D B Acid	41550	1 8000	1 7613	14,285		
50% DMA	41580	0 8000	0 8200	6,655		
Citric Acid	41590	0 2800	0 2458	1,995		
Jugs	44100			8,116		
Butoxone 175 2x2 5	15240				2,115	10,575
Butox 200 Bulk Used	15200	0 8152				
2 4, D B Acid	41550	1 8000	2 0255	21,420		
50% DMA	41580	0 8000	0 9447	9,890		
Citric Acid	41590	0 2800	0 2809	2,970		
Jugs	44200			4,230		
Butoxone 175 55	15270					
Butox 200 Bulk Used	15200	0 8152				
2 4, D B Acid	41550	1 8000				
60% DMA	41580	0 8000				
Citric Acid	41590	0 2800				

Butox 200 Packaged:

Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs
Butoxone 200 4x1	15560					
Butox 200 Bulk Used	15200	1 0000				
2 4, D B Acid	41550	2 0800				
60% DMA	41580	1 1000				
Citric Acid	41590	0 4200				
Jugs-1 gal plastic	44100					
HCC-Cordette Cont'd						
Butoxone 200 2x2 5	15540					
Butox 200 Bulk Used	15200	1 0000				
2 4, D B Acid	41550	2 0800				
60% DMA	41580	1 1000				
Citric Acid	41590	0 4200				
Jugs-2 5 gal plastic	44200					
Butoxone 200 55	15570					
Butox 200 Bulk Used	15200	1 0000				
2 4, D B Acid	41550	2 0800				
60% DMA	41580	1 1000				
Citric Acid	41590	0 4200				

Shipped from Plant:

Item No	Location	Containers	Lbs/gals
Prop Tech	3000 4 Plant		450,900
DCA	3020 4 Plant		
Diuron	3030 4 Plant		
Flake Tech	3050 4 Plant		
Flake Tech 25KG	3080 4 Plant		
3# 50 L	3180 4 Plant		
3# Bulk	3200 4 Plant		
3# 55's	3210 4 Plant		
3# 20L	3220 4 Plant	4,375	23,118
3# 200L	3250 4 Plant		
Propanex 500 55's	3280 4 Plant		
4# 20L	3280 4 Plant		
4# Bulk	3300 4 Plant		32,676
4# 55's	3310 4 Plant		
4# 210 L	3320 4 Plant		
4# 200 L	3330 4 Plant		
4# 35's	3340 4 Plant		
Stam Bulk	3400 4 Plant		38,910
Stam 35's	3420 4 Plant	3,020	105,700
Propanol 3# 35's	10010 4 Plant		
Propanol 360 210L	10020 4 Plant		
Propanol 360 200L	10030 4 Plant		
Supernox 360 200L	10040 4 Plant		
Supernox 480 200L	10050 4 Plant		
Ethephon 100%	15740 4 Plant		
Tromethamine Bulk	17000 4 Plant		
Tham 25 KG	17020 4 Plant		
Tromethamine 25KG	17120 4 Plant		

S	410	1420	87,652 80	C	410	8740	(87,652 80)
C	410	6850		S	430	1420	
C	410	5510	66,900 60	S	765	1480	(66,900 60)
C	410	5700	3,993.00	S	768	1460	(3,993 00)
C	410	5705	1,835 40	S	767	1480	(1,835 40)
C	410	5870	3,489 88	S	749	1480	(3,489 88)
S	410	1420	114,210 00	C	410	8740	(114,210 00)
C	410	6850		S	430	1420	
C	410	5510	100,245 60	S	765	1480	(100,245 60)
C	410	5700	5,994 00	S	766	1460	(5,994 00)
C	410	5705	2,732 40	S	767	1460	(2,732 40)
C	410	5870	5,752 80	S	759	1480	(5,752 80)
S	410	1420		C	410	8740	
C	410	6850		S	430	1420	
C	410	5510		S	765	1480	
C	410	5700		S	768	1460	
C	410	5705		S	767	1460	
S	430	1420		C	430	8740	
C	430	6850		S	824	1420	
C	430	5510		S	765	1480	
C	430	5700		S	768	1460	
C	430	5705		S	767	1460	
C	430	5870		S	749	1480	
S	430	1420		C	430	8740	
C	430	6850		S	824	1420	
C	430	5510		S	765	1480	
C	430	5700		S	768	1460	
C	430	5705		S	767	1460	
C	430	5870		S	759	1480	
S	430	1420		C	430	8740	
C	430	6850		S	824	1420	
C	430	5510		S	765	1480	
C	430	5700		S	768	1460	
C	430	5705		S	767	1460	

Shipped from Plant Cont'd:

Trometamol 50KG
 Tris Ultra Pure 100Kg
 Pure Tris-Hcl 100Kg
 MO
 Isoph
 4# Emul
 Emul
 TA-40 Waste Water

Item No

Location

Containers

lbs/gals

17240	4	Plant
17250	4	Plant
17260	4	Plant
40400	4	Plant
40500	4	Plant
40600	4	Plant
40900	4	Plant
	4	Plant

Shipped from O/S Plant:

Diuron
 Diuron
 Diuron
 Diuron Col 248 Kg
 Flaked Tech
 Flaked Tech
 Flaked Tech
 Flaked Tech 25Kg
 Flaked Tech 25Kg
 Diuron Col 224 Kg
 Bandit 200L
 Wham! EZ 2x2 5 gal
 Wham! EZ 2x2 5 gal
 Wham 100 Liter
 Wham 30gls
 Wham 30gls
 Wham 30gls
 Wham 30gls
 Wham 30gls
 Wham 5gls
 Wham 5gls
 Wham 5gls
 4# 35
 4# 35
 4# 35
 Super Wham 30
 Super Wham 30
 Super Wham 30
 Super Wham 30
 Super Wham 30
 Super Wham 2x2 5
 Super Wham 2x2 5
 Super wham Bulk
 Stam 35
 Duet 30
 Duet 30
 Duet 30
 Propanex 35's
 Butox 200 Bulk
 Butox 175 2x2 5
 Butox 175 2x2 5
 Butox 175 2x2 5
 Butox 175 2x2 5
 Butox 175 2x2 5
 Butox 175 4x1
 Butox 175 4x1
 Butox 175 4x1
 Butox 175 4x1
 Butox 175 4x1
 Butox 175 4x1
 Butox 175 4x1
 Butox 200 2x2 5
 Butox 200 2x2 5
 Butox 200 2x2 5
 Butox 200 2x2 5
 Butox 200 2x2 5
 Butox 200 2x2 5
 Butox 200 2x2 5

Item No

Location

Containers

lbs/gals

3030	10	BAH		
3030	52	Gulf States		
3030	87	In Transit		
3040	86	Odom		
3050	10	BAH		351,000
3050	78	Odom-Pachuta		
3050	86	Odom		
3060	78	Odom-Pachuta	1,120	61,712
3060	86	Odom		
3070	86	Odom		
3140	86	Odom		
3180	10	BAH		
3180	86	Odom		
3230	86	Odom		
3240	10	BAH	353	10,580
3240	59	Rice Farmers		
3240	78	Odom-Pachuta	(92)	(2,760)
3240	86	Odom		
3240	88	Amer Rice		
3260	10	BAH		
3260	86	Odom		
3260	88	Amer Rice		
3340	10	BAH		
3340	15	Amer Whse		
3340	59	Rice Farmers		
3350	10	BAH	2,760	82,800
3350	15	Amer Whse		
3350	59	Rice Farmers		
3350	78	Odom-Pachuta	(121)	(3,630)
3350	86	Odom	120	3,600
3360	10	BAH		
3360	86	Odom		
3370	86	Odom		17,358
3420	10	BAH		
3430	10	BAH	685	20,550
3430	78	Odom-Pachuta	(490)	(14,700)
3430	86	Odom	(175)	(5,250)
4310	86	Odom		
15200	57	HCC-Cordale		
15240	10	BAH		
15240	20	Gray-Albany		
15240	21	Gray-Ashburn	72	360
15240	30	AWS		
15240	57	HCC-Cordale		
15260	10	BAH		
15260	11	Cascio		
15260	20	Gray-Albany		
15260	21	Gray-Ashburn	540	2,160
15260	30	AWS		
15260	57	HCC-Cordale		
15540	10	BAH		
15540	15	American W/H		
15540	20	Gray-Albany		
15540	21	Gray-Ashburn		
15540	30	AWS	144	720
15540	35	Robertson	36	180
15540	57	HCC-Cordale		

Shipped from O/S Plant Cont'd:

	Item No	Location
Butox 200 4x1	15560	B/H
Butox 200 4x1	15560	15 American WH
Butox 200 4x1	15560	20 Gray-Albany
Butox 200 4x1	15560	21 Gray-Ashburn
Butox 200 4x1	15560	30 AWS
Butox 200 4x1	15560	35 Robertson
Butox 200 4x1	15560	57 HCC-Cordale
Butox 7500 10x2 33	15560	10 B/H
Butox 7500 10x2 33	15560	15 American WH
Butox 7500 10x2 33	15560	20 Gray-Albany
Butox 7500 10x2 33	15560	21 Gray-Ashburn
Butox 7500 10x2 33	15560	86 Odom
Butox 7500 10x2 33	15560	30 AWS
Pluck 2x2 5	15700	20 Gray-Albany
Pluck 2x2 5	15700	78 Odom-Pachuta
Pluck 30	15730	10 B/H
Pluck 30	15730	78 Odom-Pachuta
Ethephon	15740	78 Odom-Pachuta
Tromethamne 25Kg	17120	31 Merflex
Tromethamne 25Kg	17120	16 Antwerp
2,4 DB Acid	41550	97 In Trans

Containers lbs/gals

192 4,474

242 13,339

180 9,922

Transfers:

	Item No	From	To
DCA	3020	4 Pt	97 In Trans
DCA	3020	4 Pt	100 EMV-Hungary
DCA	3020	97 In Trans	4 Pt
Diuron	3030	4 Pt	10 B/H
Diuron	3030	4 Pt	86 Odom
Diuron	3030	10 B/H	4 Pt
Diuron	3030	10 B/H	86 Odom
Diuron	3030	86 Odom	78 Odom-Pachuta
Diuron	3030	97 In Trans	52 Gulf States
Diuron 8 Grade	3040	4 Pt	10 B/H
Diuron 8 Grade	3040	10 B/H	4 Pt
Flake Tech	3050	4 Pt	10 B/H
Flake Tech	3050	4 Pt	58 HCC-W/H
Flake Tech	3050	4 Pt	78 Pachuta
Flake Tech	3050	4 Pt	86 Odom
Flake Tech	3050	10 B/H	4 Pt
Flake Tech	3050	10 B/H	86 Odom
Flake Tech	3050	10 B/H	58 HCC-W/H
Flake Tech	3050	10 B/H	78 Pachuta
Flake Tech	3050	86 Odom	10 B/H
Flake Tech	3050	86 Odom	78 Odom-Pachuta
Flake Tech 25KG	3060	86 Odom	4 Pt
Flake Tech 25KG	3060	86 Odom	78 Odom-Pachuta
Flake Tech 25KG	3060	4 Pt	86 Odom
Diuron Col 224 Kg	3070	86 Odom	78 Odom-Pachuta
Bandit 200L	3140	78 Odom-Pachuta	86 Odom
Wham 2x2 5	3180	10 B/H	4 Pt
Wham 2x2 5	3180	10 B/H	86 Odom Ind
Wham 2x2 5	3180	86 Odom Ind	4 Pt
Wham 2x2 5	3180	86 Odom Ind	10 B/H
3# 20L	3220	25 Platte	4 Pt
3# 20L	3220	4 Pt	25 Platte
Wham 30	3240	4 Pt	86 Odom
Wham 30	3240	4 Pt	10 B/H
Wham 30	3240	10 B/H	59 Rice Farmers
Wham 30	3240	10 B/H	86 Odom
Wham 30	3240	10 B/H	86 American Rice
Wham 30	3240	59 Rice Farmers	10 B/H
Wham 30	3240	86 Odom Ind	4 Pt
Wham 30	3240	86 Odom Ind	10 B/H
Wham 30	3240	86 Odom Ind	59 Rice Farmers
Wham 30	3240	86 Odom Ind	86 Amer Rice
Wham 30	3240	86 Amer Rice	10 B/H

Cases/Drums Gals/Lbs

318,800

187,200

3,600

62,400

1,200

288,500

1,500

357,000

39,000

Transfers Cont'd:	Item No	From	To	Cases/Drums	Gals/Lbs
Wham 5	3260	4 Pit	86 Odom		
Wham 5	3260	4 Pit	10 B/H		
Wham 5	3260	10 B/H	4 Pit		
Wham 5	3260	10 B/H	86 Odom Ind		
Wham 5	3260	86 Odom Ind	86 American Rice		
Wham 5	3260	86 Odom Ind	10 B/H		
Wham 5	3260	86 Odom Ind	4 Pit		
Wham 5	3260	88 American Rice (	10 B/H		
4# 35's	3340	4 Pit	10 B/H		
4# 35's	3340	4 Pit	15 American		
4# 35's	3340	4 Pit	59 Rice Farmers		
4# 35's	3340	10 B/H	4 Pit		
4# 35's	3340	10 B/H	15 American		
4# 35's	3340	15 American	4 Pit		
4# 35's	3340	59 Rice Farmers	4 Pit		
4# 35's	3340	59 Rice Farmers	10 B/H		
4# 35's	3340	88 American Rice (	4 Pit		
Super Wham 30	3350	4 Pit	10 B/H		
Super Wham 30	3350	10 B/H	15 Amer Whse		
Super Wham 30	3350	10 B/H	59 Rice Farmers		
Super Wham 30	3350	10 B/H	86 Odom	720	21,600
Super Wham 30	3350	15 Amer Whse	86 Odom		
Super Wham 30	3350	15 Amer Whse	10 B/H		
Super Wham 30	3350	69 Rice Farmers	10 B/H		
Super Wham 30	3350	78 Odom Pachuta	86 Odom	360	10,800
Super Wham 30	3350	86 Odom Ind	4 Pit		
Super Wham 30	3350	86 Odom Ind	10 B/H	2,640	79,200
Super Wham 30	3350	86 Odom Ind	15 Amer Whse		
Super Wham 30	3350	86 Odom Ind	59 Rice Farmers		
Super Wham 2x2 5	3360	4 Pit	10 B/H		
Super Wham 2x2 5	3360	4 Pit	86 Odom Ind		
Super Wham 2x2 5	3360	10 B/H	4 Pit		
Super Wham 2x2 5	3360	10 B/H	86 Odom Ind		
Super Wham 2x2 5	3360	78 Odom-Pachuta	86 Odom Ind		
Super Wham 2x2 5	3360	86 Odom Ind	4 Pit		
Super Wham 2x2 5	3360	86 Odom Ind	10 B/H		
Super Wham 2x2 5	3360	86 Odom Ind	78 Pachuta		
Stam 35	3420	4 Pit	10 B/H		
Stam 35	3420	10 B/H	4 Pit		
Duet 30	3430	10 B/H	86 Odom-Waynesboro	360	10,800
Duet 30	3430	86 Odom Ind	10 B/H	2,160	64,800
Duet 30	3430	10 B/H	78 Pachuta	815	24,450
Duet 30	3430	78 Odom-Pachuta	10 B/H	480	14,400
Duet 30	3430	86 Odom Ind	78 Pachuta	640	25,200
Butox 200 Bulk	15200	97 In Transit	57 HCC Cordale		
Butox 175 2x2 5	15240	11 Casco	10 B/H		
Butox 175 2x2 5	15240	21 Gray-Ashburn	10 B/H		
Butox 175 2x2 5	15240	21 Gray-Ashburn	20 Gray-Albany		
Butox 175 2x2 5	15240	21 Gray-Ashburn	57 HCC Cordale		
Butox 175 2x2 5	15240	21 Gray-Ashburn	30 AWS		
Butox 175 2x2 5	15240	57 HCC-Cordale	10 B/H		
Butox 175 2x2 5	15240	57 HCC-Cordale	20 Gray-Albany	782	3,960
Butox 175 2x2 5	15240	57 HCC-Cordale	21 Gray-Ashburn		
Butox 175 2x2 5	15240	57 HCC-Cordale	30 AWS		
Butox 175 4x1	15260	10 B/H	4 Pit		
Butox 175 4x1	15260	10 B/H	21 Gray-Ashburn		
Butox 175 4x1	15260	20 Gray-Albany	10 B/H		
Butox 175 4x1	15260	20 Gray-Albany	21 Gray-Ashburn		
Butox 175 4x1	15260	20 Gray-Albany	30 AWS		
Butox 175 4x1	15260	21 Gray-Ashburn	10 B/H		
Butox 175 4x1	15260	21 Gray-Ashburn	11 Casco		
Butox 175 4x1	15260	21 Gray-Ashburn	20 Gray-Albany		
Butox 175 4x1	15260	21 Gray-Ashburn	30 AWS		
Butox 175 4x1	15260	21 Gray-Ashburn	57 HCC Cordale		
Butox 175 4x1	15260	30 AWS	20 Gray-Albany		

Transfers Cont'd:	Item No	From	To	Cases/Drums	Gals/Lbs
Butox 175 4x1	15260	57 HCC-Cordale	10 B/H	360	1,440
Butox 175 4x1	15260	57 HCC-Cordale	11 Cascio	360	1,440
Butox 175 4x1	15260	57 HCC-Cordale	20 Gray-Albany		
Butox 175 4x1	15260	57 HCC-Cordale	21 Gray-Ashburn		
Butox 175 4x1	15260	57 HCC-Cordale	30 AWS		
Butox 200 2x2 5	15540	10 B/H	15 American		
Butox 200 2x2 5	15540	10 B/H	35 Robertson		
Butox 200 2x2 5	15540	10 B/H	57 HCC-Cordale		
Butox 200 2x2 5	15540	11 Cascio	10 B/H		
Butox 200 2x2 5	15540	11 Cascio	30 AWS		
Butox 200 2x2 5	15540	11 Cascio	57 HCC-Cordale		
Butox 200 2x2 5	15540	15 American	57 HCC		
Butox 200 2x2 5	15540	20 Gray-Albany	4 Pt		
Butox 200 2x2 5	15540	20 Gray-Albany	15 American		
Butox 200 2x2 5	15540	20 Gray-Albany	35 Robertson		
Butox 200 2x2 5	15540	21 Gray-Ashburn	15 American		
Butox 200 2x2 5	15540	21 Gray-Ashburn	30 AWS		
Butox 200 2x2 5	15540	21 Gray-Ashburn	35 Robertson		
Butox 200 2x2 5	15540	21 Gray-Ashburn	15 American		
Butox 200 2x2 5	15540	30 AWS	15 American		
Butox 200 2x2 5	15540	35 Robertson	15 American		
Butox 200 2x2 5	15540	57 HCC-Cordale	10 B/H		
Butox 200 2x2 5	15540	57 HCC-Cordale	15 American		
Butox 200 2x2 5	15540	57 HCC-Cordale	20 Gray-Albany		
Butox 200 2x2 5	15540	57 HCC-Cordale	21 Gray-Ashburn	576	2,680
Butox 200 2x2 5	15540	57 HCC-Cordale	30 AWS		
Butox 200 2x2 5	15540	57 HCC-Cordale	35 Robertson		
Butox 200 4x1	15560	11 Cascio	10 B/H		
Butox 200 4x1	15560	11 Cascio	35 Robertson		
Butox 200 4x1	15560	15 Amer Whse	35 Robertson		
Butox 200 4x1	15560	20 Gray-Albany	30 AWS		
Butox 200 4x1	15560	20 Gray-Albany	35 Robertson		
Butox 200 4x1	15560	21 Gray-Ashburn	30 AWS		
Butox 200 4x1	15560	57 HCC-Cordale	20 Gray-Albany		
Butox 200 4x1	15560	57 HCC-Cordale	21 Gray-Ashburn		
Butox 200 4x1	15560	57 HCC-Cordale	35 Robertson		
Butox 7500 DF 10x2 33	15580	10 B/H	15 American		
Butox 7500 DF 10x2 33	15580	15 American	10 B/H		
Butox 7500 DF 10x2 33	15580	21 Gray-Ashburn	15 American	48	1,072
Butox 7500 DF 10x2 33	15580	20 Gray-Albany	15 American	182	4,241
Butox 7500 DF 10x2 33	15580	86 Odom	10 B/H		
Butox 7500 DF 10x2 33	15580	86 Odom	21 Gray-Ashburn		
Tromethamine Bulk	17000	4 Pt	31 Meritex		
Tromethamine Bulk	17000	31 Meritex	4 Pt		
Tromethamine 25 Kg	17120	10 B/H	4 Pt		
Tromethamine 25 Kg	17120	4 Pt	31 Meritex		
Tromethamine 25 Kg	17120	4 Pt	18 Antwerp		
Tromethamine 25 Kg	17120	31 Meritex	4 Pt		
DCPI	40150	52 Gulf States	4 Pt		
DCPI	40150	97 In-Transit	52 Gulf States		
DCPI	40150	97 In-Transit	4 Pt		103,065
2,4 D-B Acid	41550	20 Gray-Albany	57 HCC-Cordale		44,062
2,4 D-B Acid	41550	21 Gray-Ashburn	57 HCC-Cordale		
2,4 D-B Acid	41550	86 Odom	10 B/H		
Hi Sil	41500	4 Plant	86 Odom-Waynesboro		2,024
Hi Sil	41500	86 Odom	10 B/H		
Stepwet	41610	86 Odom	10 B/H		
Con't Clay	41620	86 Odom	10 B/H		
Ethephon	41680	4 Pt	86 Odom-Waynesboro		
Soprophor	41690	78 Pachuta	86 Odom-Waynesboro		
Mt 30 gallon Drums	42100	86 Odom	78 Odom-Pachuta		520
Nitromethane	42680	10 B/H	4 Pt		
1 Gal jug mt	44100	20 Gray-Albany	57 HCC-Cordale		
2 5 Gal jug mt	44200	57 HCC-Cordale	78 Odom-Pachuta		
2 5 Gal jug mt	44200	78 Odom-Pachuta	86 Odom-Waynesboro		

Item No	From	To
44200	86 Odorn	78 Odorn-Pachuta
45120	86 Odorn	78 Odorn-Pachuta
45130	86 Odorn	78 Odorn-Pachuta
45150	86 Odorn	78 Odorn-Pachuta
45200	86 Odorn	78 Odorn-Pachuta

Raw Materials Received:

	Item No	Lbs		Item No	Gals/Lbs
DCA	3020		Cordtex/Gray		
Flake Tech	3050				
P Acid	40200	679,520	60 % DMA	41580	
P Anthy	40300		Citric Acid	41590	
M O	40400	141,590	2,4 D-B Acid	41550	
Isoph/Mibk	41080	403,640	Jugs-1 gal plastic	44100	
Isoph	40500	87,080	Jugs-2 5 gal Plast	44200	
Emul	40600	132,220			
Aromatic B	40800	48,980	Odom-Waynesboro		
Amul	40900	44,160	Nadex	41810	
Mibk	41300		Stepperse	41600	
Ethephon	41680		Glycerine	41480	48,380
MCPA-IOE	40930		Alfonc	41490	
53 Crystal Litho	42550		HISIL	41500	
55 m's Black	42300		Poly O	41470	
35 m's Plastic	42220	2,160	Monwet	41460	30,000
35 m's Plastic	42230	240	30 m's	42100	6,300
Cone Blend			2 5 gal jugs	44200	
Stepfac			Citric Acid	41590	
50L m's			Veegum	41570	60,000
ODCB	41000	1,648,685	Continental Clay	41620	
Sulfuric Acid	41010	1,291,840	Kelzan	41510	4,409
Nitric Acid	41020	642,980	DC Antifoam	45140	1760
Soda Ash	41050	10,800	Arquad	45100	
Lime	41060	30,000	Arquar 2C75	45120	
Caustic 50%	41530		Irgalite	45130	
50% Rayon Caus	45090		Sorprophor 4D38+	41690	70,548
Cleaning Solution		754	55 m's		
Ethephon	41680		Proxel	41730	8,800
Platinum	41040 (In Transf)		Butachlor	45200	
Catalyst	41070	441	Ucarcide	41750	22,500
Peroxide	41090	19,500	Odom-Pachuta	41680	
Hydrogen	41030	72,680	2,4 D-B Acid	41590	Albany
Methanol	42640		2.5 m's	44200	
mt 55's		491	Transit-N O		
TEPA			Ethephon	41680	
			Gray Dist		
15 gal M's			2,4 D-B Acid	41550	In Transf
Sun Oil	41840		2,4 D-B Acid	41550	68,184 Albany
Morpholine	41630		OCPI	40150	
55 gal Plastic			TA		
5 m's	42000	2,592	50% Caustic	45090	
30 m's			Nitromethane	42680	
20 L m's	42000 Platt		Formaldehyde	41540	
2.5 m's	44200		Methanol	42640	
			Raney Nickel	42690	
			Sulfuric Acid	41010	
Diuren:			Sodium Bromide		
Heptane	41660	40,260	DMA	42700	
Sulfuric Acid	41520		Calcium Chloride		
Anhydrous DMA	41650		Caustic 50%	41530	
			Sulfuric Acid	41520	

Raw Materials Received Cont'd:

Item No	Lbs	Item No	Gals/Lbs
PMC 5-Nitro:		BlackHawk:	
Step 3 90800	118,140	Nitromethane 42680	
Step 4 90810		2.5 Mt jugs 44200	
Step 5 90820			
Calcium Chloride 90830			
Chlorine 90720	4,000	Platt	
A Sulfate 90710	45,060	20 m's 42000	
G Acid 90700	10,885		
50% Caustic 45090	95,180	AcFluorfen:	
20% Oleum 90770	79,280	50% Caustic 41530	138,460
Methanol 90790		Mixed Nitrating Ac 41700	
Soda Ash 90740		Acetic Anhydride 41710	
Toluene 90760	147,360	98 % Sulfonic Acid 41010	
		Nitric Acid 41020	48,820
93% Sulfuric Acid 90750		Ethylene Dichloride 41720	
Mixed Acid 90730	3,100	Calcium Chloride	
Spent Acid		R118118 90200	488,600
		Pertone D 41740	44,940
Ethephon:			
PCL3 46220		CYMP:	
Ethylene Oxide 46210		DICHL 90840	
Sulfuric Acid 41010		IPA 90850	
Anhydrous Hcl 46200		Hcl 90860	
Nitrogen		Catalyst 90870	
E Glycol			
Acetone			
Calcium Chloride			
Dover Phos:			
TPP 90910	80,160		
PE 90950	44,940		
DCP 90920	69,200		
Xylene 90940	100,360		
Methanol 90930	44,380		

Adjustments to Inventory (Per physical; samples; etc.):

Product	Item No	Location	Type Adj	Cases/Drums	Gals/Lbs				
Propanol Tech	3000	4 Plant	Adj-Inv		S 1054 1440		S 702 1420		
Flaked Tech	3050	4 Plant	Adj-Inv		C 955 7700		S 804 1420		
Flaked Tech	3050	10 B/H	Adj-Inv		C 164 6835		S 804 1420		
Flaked Tech	3050	78 Odom-Pachuta	Adj-Inv		C 164 6835		S 804 1420		
Flaked Tech	3050	88 Odom	Adj-Inv		C 164 6835		S 804 1420		
Flaked Tech 25 Kg	3060	4 Plant	Adj-Inv		C 955 7700		S 822 1420		
Flaked Tech 25 Kg	3060	88 Odom	Adj-Inv		C 3055 5100		S 822 1420		
Duron Std Grade	3030	4 Plant	Adj-Inv		C 3057 5100	(128,400)	S 816 1420	(356,952.00)	
Duron B Grade	3040	4 Plant	Adj-Inv		C 3057 5100	128,400	S 844 1420	356,952.00	
Duron	3030	97 In Transit	Adj Inv To Quantity Shipped to Customer		C 3057 5100		S 816 1420		
Duron Col 224 Kg	3070	86 Odom	Adj to Physical		C 3058 5100		S 848 1420		
Wham 2x2.5	3180	10 B/H	Adj to Physical		C 3084 5100		S 832 1420		
Wham 2x2.5	3180	88 Odom	Adj to Physical		C 3084 5100		S 832 1420		
38 20 L	3220	25 Platt	Leaker		C 3087 5100		S 819 1420		
38 Propanol 200L	3250	4 Plant	Label Change		C 3087 5100		S 807 1420		
Wham 5	3260	4 Plant	Adj-Inv		C 3084 5100		S 808 1420		
Wham 5	3260	10 B/H	Adj-Inv		C 3084 5100		S 808 1420		
Wham 5	3260	88 Odom	Prod Complaint		C 3084 5170		S 808 1420		
Propanex 500	3280	4 Plant	Label Change		C 3042 5100		S 829 1420		
48 Bulk	3300	4 Plant	Adj-Inv		C 3069 5100		S 817 1420		
48 35	3340	4 Plant	Donation		C 3069 5100		S 814 1420		
48 35	3340	15 American	Adj-Inv		C 3069 5100		S 814 1420		
48 65's	3310	4 Plant	Label Change		C 3089 5100		S 818 1420		
48 210L	3320	4 Plant	Adj-Inv		C 3069 5100		S 836 1420		
Super Wham 30 g	3350	15 American	Adj-Inv		C 3084 5100		S 831 1420		
Super Wham 30 g	3350	88 Odom	Adj-Inv		C 3084 5100		S 831 1420		
Prop Tech	3000	4 Plant	Melted F Tech		C 155 6810		S 702 1420		

Adjustments to Inventory Conf'd (Per physical; samples; etc.):

Product	Item No	Location	Type Adj	Cases/Drums	Gals/Lbs				
Flake Tech	3050	4 Plant	Melted F Tech			S	804	1420	C 155 6740
Flake Tech	3050	88 Odom-Waynesboro	Adj to Physical			C	164	6835	S 804 1420
Flaked Tech 25 Kg	3060	88 Odom-Waynesboro	Adj to Physical			C	3055	5100	S 822 1420
Aham 2x2 5	3180	10 B/H	Adj to Physical			C	3064	5100	S 832 1420
Aham 30	3240	10 B/H	Samples			C	984	7700	S 805 1420
Aham 30	3240	88 Odom-Waynesboro	Samples			C	984	7700	S 808 1420
Prop 48 210 L	3320	4 Plant	Adj-Inv			C	3069	5100	S 836 1420
48 35's	3340	4 Plant	Adj-Inv			C	3069	5100	S 814 1420
48 35's	3340	10 B/H	Adj-Inv			C	3069	5100	S 814 1420
Super Wham 30	3350	10 B/H	Adj to Physical			C	3064	5100	S 831 1420
Super Wham 2x2 5	3360	88 Odom-Waynesboro	Adj-Inv			C	984	7700	S 834 1420
Super Wham 2x2 5	3360	10 B/H	Adj-Inv			C	3064	5100	S 834 1420
Super Wham 2x2 5	3360	88 Odom	Samples			C	984	7700	S 834 1420
Propant 360 210L	10020	4 Plant	Repackage			C	3067	5100	S 826 1420
Propant 360 200L	10030	4 Plant	Label Change			C	3067	5100	S 825 1420
Butox 175 2x2 5	15240	57 HCC-Cordate	Inv Adj			C	410	5100	S 410 1420
Butox 175 2x2 5	15240	10 B/H	Inv Adj			C	410	5100	S 410 1420
Butox 175 2x2 5	15240	20 Gray-Albany	Inv Adj			C	410	5100	S 410 1420
Butox 175 4x1	15260	11 Cascio	Samples			C	410	7700	S 410 1420
Butox 175 4x1	15260	20 Gray-Albany	Inv Adj			C	410	5100	S 410 1420
Butox 200 2x2 5	15540	57 HCC-Cordate	Inv Adj			C	430	5100	S 430 1420
Butox 200 2x2 5	15540	15 American	Inv Adj			C	430	5100	S 430 1420
Butox 200 4x1	15560	57 HCC-Cordate	Inv Adj			C	430	5100	S 430 1420
Butox 7500 DF 10x2 33	15580	20 Gray-Albany	Inv Adj			C	420	5100	S 850 1420
Butox 7500 DF 10x2 33	15580	10 B/H	Samples			C	420	7700	S 850 1420
Ethephon	15740	21 Gray-Ashburn	Set Up Fresh Goods			C	187	6740	S 851 1420
Ethephon	15740	78 Odom-Pachuta	Set Up Finish Goods						
Tromethamine Bulk	17000	4 Plant	Adj-Inv			C	183	6740	S 849 1420
Tromethamine 25 Kg	17120	4 Plant	Adj-Inv			C	3683	5100	S 843 1420
Trometamol 50 Kg	17240	4 Plant	Adj-Inv			C	3683	5100	S 847 1420
Tns Ultra Pure 100Kg	17250	4 Plant	Adj-Inv			C	3683	5100	S 853 1420
DCPI	40150	97 In Transit	Adj to Physical			C	157	5635	S 715 1460
Dowfax	40700	88 Odom-Waynesboro	Adj to Physical			C	164	5850	S 753 1460
Arnul Emulsifier	40900	78 Odom-Pachuta	Adj to Physical			C	168	5675	S 720 1460
TM-2 Emulsifier	40910	4 Plant	Adj to Physical			C	151	6400	S 722 1460
Poly Solv	40920	4 Plant	Adj to Physical			C	151	6400	S 723 1460
Soda Ash	41050	4 Plant	Sold			C	151	6400	S 708 1460
Morwet	41460	88 Odom-Waynesboro	Adj to Physical			C	164	5850	S 728 1460
Polyfon O	41470	88 Odom-Waynesboro	Adj to Physical			C	164	5850	S 727 1460
Glycerine	41480	88 Odom-Waynesboro	Adj to Physical			C	164	5850	S 728 1460
Afonic	41490	88 Odom-Waynesboro	Adj to Physical			C	164	5850	S 729 1460
Kelzan	41510	88 Odom-Waynesboro	Adj to Physical			C	164	5850	S 781 1460
50% Caustic	41530	4 Plant	Adj Inv			C	151	6400	S 763 1460
Formaldehyde	41540	4 Plant	Used out of Vinnings Stock			S	8900	1230	S 784 1460
2,4 D-B Acid	41550	88 Odom-Waynesboro	Adj to Physical			C	410	7700	S 785 1460
Veegum	41570	88 Odom-Waynesboro	Adj to Physical			C	164	5850	S 731 1460
60% DMA	41580	57 HCC-Cordate	Adj to Physical			C	410	5700	S 766 1460
Citric Acid	41590	88 Odom-Waynesboro	Adj to Physical			C	164	5850	S 767 1460
Morpholine	41630	4 Plant	Adj-Water Treatment			C	151	6400	S 768 1460
Carbaryl Tech	41670	88 Odom-Waynesboro	Adj to Physical			C	164	5850	S 757 1460
Ethephon	41680	21 Gray-Ashburn	Set Up Finish Good						S 791 1460
Ethephon	41680	78 Odom-Pachuta	Set Up Finish Good			C	187	5910	S 791 1460
Ethephon	41680	88 Odom-Waynesboro	Adj-Inv			C	196	5710	S 791 1460
Soprophor	41690	88 Odom-Waynesboro	Samples			C	164	5850	S 809 1460
Drums 30 plastic	42100	88 Odom-Waynesboro	Adj to Physical			C	164	5870	S 752 1460
35 mt's	42210	4 Plant	Adj-Inv			C	1089	5890	S 738 1460
55 mt black	42300	78 Odom-Pachuta	Adj to Physical			C	1058	5890	S 742 1460
55 mt Crystal	42550	4 Plant	Adj-Inv			S	4	1230	S 756 1460
Methanol	42640	4 Plant	Adj-Inv FMC			C	198	6400	S 735 1460
HoL	42670	4 Plant	Adj-Inv			C	151	6400	S 758 1460
Sodium Hypo	42610	4 Plant	Sent to Ponds			C	151	6400	S 789 1460
Hydrodamine Sulfate	42850	4 Plant	Adj to Physical			C	151	6400	S 738 1460
Jugs 1	44100	57 HCC-Cordate	Adj-Inv			C	430	5870	S 749 1460
Jugs 2.5	44200	88 Odom-Waynesboro	Adj to Physical			C	164	5870	S 759 1460

Adjustments to Inventory Conf'd(Per physical; samples; etc.):

Product	Item No	Location	Type Adj	Cases/Drums	Gals/Lbs				
ugs 2 S	44200	78 Odom-Pachuta	Adj to Physical			C	164	5870	S 759 1460
ntifoam AF 1500	45000	4 Plant	Transfer to Vinning Stock			S	8900	1230	S 770 1460
IMPA	45020	4 Plant	Transfer to Vinning Stock			S	8900	1230	S 772 1460
IMS	45030	4 Plant	Used out of Vinning Stock			S	8900	1230	S 773 1460
Metacure T-1	45040	4 Plant	Transfer to Cedar Stock			S	8900	1230	S 774 1460
0% Rayon Caustic	45080	4 Plant	Transfer to Cedar Stock			S	8900	1230	S 779 1460
0% Rayon Caustic	45090	4 Plant	Used in Ponds			C	2251	6400	S 792 1460
0% Rayon Caustic	45090	4 Plant	Adj to Physical			C	151	6400	S 782 1460
urquad	45100	86 Odom-Waynesboro	Adj to Physical			C	158	5850	S 781 1460
urquar	45120	86 Odom-Waynesboro	Adj to Physical			C	158	5850	S 783 1460
galite Blue	45130	86 Odom-Waynesboro	Adj to Physical			C	158	5850	S 784 1460
XC 1500 Antifoam	45140	86 Odom-Waynesboro	Samples			C	164	5850	S 785 1460
5 mt	45150	86 Odom-Waynesboro	Adj to Physical			C	1058	5890	S 786 1460
Jans 5 gal mt's	42000	4 Plant	Adj to Physical			C	151	6400	S 739 1460

Misc Activity:

				Lbs/Gls					
JCA Shipped for conversion to OCPI									
JCA	3020	4 Plant							
OCPI Conversion									
OCPI	40150	97 In-Transit	Purchased			S	2	1440	S 715 1460
JCA	3020	97 In-Transit	Used			S	2	1440	S 701 1420
Platinum Purchased									
Platinum	41040	97 In-Transit							
AG Purchased									
Autox 200 Bulk	15200	97 In-Transit	Purchased			S	430	1420	C 430 6740
Juron	3030	97 In-Transit	Purchased			S	816	1420	C 157 6740
JCA	3020	100 EMV-Hungary	Purchased						
JCA	3020	97 In-Transit	Purchased		97,002	C	153	5910	S 701 1420
JCA	3020	97 In-Transit	Used			C	157	5910	S 701 1420
JCA	3020	97 In-Transit	Sold			C	3653	5100	S 701 1420
JCA Returned to Westrade									
JCA	3020	4 Plant	Purchased			S	710	1420	C 153 6740
JCA	3020	97 In Transit	Purchased from Bayer			S	710	1420	C 153 6740
lake Tech	3050	4 Plant	Purchased			S	804	1420	C 155 6740
AG Purchased									
Ethephon	15740	97 In-Transit	Purchased			S	851	1420	C 187 6740
AG Purchased									
Ins Ultr Pure 100 Kg	17250	4 Plant	Purchased			S	853	1420	C 181 6740
Pure Tns Hcl 100 Kg	17260	4 Plant	Purchased			S	856	1420	C 181 6740
JOCB Purchased									
JOCB Used	41000	97 In Transit				S	2	1440	S 703 1460
Cone Solvents									
Isophorone Purchased	40500	32 Cone Solvents	Purchased						

DAIR - WEST HELENA
Production & Sales Units
4/30/1999

CC

C McGee
B Christian
P. Fields

Fds Copy

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Item	PRODUCE		Prod	SOLD		Prod	Year-To-Date Contracts				
	Drums	lbs/gls		Drums	lbs/gls						
MP	5110		73			590	4,230				
silurion 100% AI	5120	151,627	88		151,627	583	542,722				
FG	5250		74			578					
overPhos	5150	28,720	72		28,720	589	38,180				
4C 5-Nitro	5280	34,017	70		34,017	580	103,325				
1	17000		87					C	3683	5100	87,692 61 S 837 1420
1 25 Kg	17020										S 842 1420
ure Tromethamine 25Kg	17120			422	23,261						S 843 1420
ure Tromethamine 50Kg	17230										S 846 1420
Tromethamine Total					23,261	588					(87,692 61)
rometamol 25 Kg	17220							C	3681	5100	S 845 1420
rometamol 50 Kg	17240										S 847 1420
1e Ultra Pure 100 Kg	17250										S 853 1420
ure Tris Hcl 100 Kg	17260										S 855 1420
Trometamol Total			85			581					
Tech	3000	1,500,572	20		450,900	554		C	3054	5100	455,409 00 S 702 1420
CA	3020	1,388,829	10			553		C	3053	5100	S 701 1420
uron	3030	183,681			92,400			C	3057	5100	258,872 00 S 816 1420
uron B Grade	3040										S 844 1420
Total Duron		183,681	11		92,400	557					
luron Col 224 Kg	3070		12			558		C	3068	5100	S 848 1420
lact Tech 25 Kg	3060	1,380 74,936		1,120	61,712			C	3055	5100	447,541 36 S 822 1420
laked Tech	3050	369,000	21		351,000						S 804 1420
Total Flake Tech					412,712	555					(78,991.36)
ropantl 360-200L	10030							C	3087	5100	156,967 83 S 825 1420
ropantl 360 35 gl	10010										S 838 1420
ropantl 360 210L	10020										S 828 1420
upermax 360 200L	10040										S 830 1420
# bulk	3200	26,680	23								S 802 1420
# 50 L	3180										S 854 1420
# 20L	3220	4,873 25,749		4,375	23,118						S 819 1420
# 200L	3250										S 807 1420
# 55	3210										S 808 1420
3# Total					23,118	567					
Aham 2x2 5	3180							C	3084	5100	787,690 16 S 832 1420
Aham 5	3260										S 808 1420
Aham 100L	3230										S 828 1420
Aham 30	3240			261	7,830						S 805 1420
Super Wham Bulk	3370	17,359			17,356						S 858 1420
Super Wham 2x2 5	3360										S 834 1420
Super Wham 30	3350	2,845 85,350		2,759	82,770						S 831 1420
Wham Sub-Total		102,709	25		107,858	564					(610,842 60)
Duet 30	3430	2,084 62,520		20	600			C	3059	5100	4,398 00 S 823 1420
Duet Total		62,520	59		600	559					
Stam bulk	3400	103,824	32		38,910						S 811 1420
Stam 35	3420	2,818 88,630		3,020	105,700			C	3072	5100	1,094,272 10 S 813 1420
Stam Total					142,610	572					(269,812 10)
4# bulk	3300	32,676	24		32,676			C	3069	5100	228,405 24 S 817 1420
Propanex 500 55	3280										S 829 1420
4# 20 L	3280										S 812 1420
4# 55	3310										S 818 1420
4# 210 L	3320										S 836 1420
4# 200 L	3330										S 838 1420
4# 35	3340										S 814 1420
Propanex 35	4310										S 814 1420
Supermax 480 200L	10050										S 835 1420
Prop 4# Domestic Sales					32,676	569					(228,405 24)

ADEQ0011577

ADEQ0011577

Fresh Goods Standards.

Product	Item No	Unit	Per Unit	
Propanil Tech Bulk	3000	lbs	1 01	
DCA-Cedar	3020	lbs	1.02	
Diuron	3030	lbs	2.78	
Diuron B Grade	3040	lbs	2 78	
Flaked Tech	3050	lbs	1 05	
Flaked Tech 25Kg	3060	lbs	1 28	
Diuron Col 224 Kg	3070	lbs	1 86	
55% Blend	3100	lbs	1 01	
Bandit 200L	3140	gls	13 75	
Wham DF (80%) 40#	3150	lbs		1 70
Wham! EZ 2x2 5 Gal	3180	gls	7 38	
3# 50 Liter	3190	gls	6 79	
Propanil 3# bulk	3200	gls	6 11	
Propanil 3# 55 gal	3210	gls	6 79	
Propanil 3# 20L	3220	gls	6 79	
Wham 100 Liter	3230	gls	7 38	
Wham 30 gal	3240	gls	7 38	
Propanil 3# 200L	3250	gls	6 78	
Wham 5 gal	3260	gls	7 38	
Wham 80% 50#	3270	lbs		1 70
Propanex 500 55 Gal	3280	gls	7 75	
Propanil 4# 20L	3290	gls	7 75	
Propanil 4# Bulk	3300	gls	6 99	
Propanil 4# 55 gal	3310	gls	7 75	
Propanil 4# 210 L	3320	gls	7 75	
Propanil 4# 200L	3330	gls	7 75	
Propanil 4# 35 gal	3340	gls	7 75	
Super Wham! 30 gal	3350	gls	7 38	
Super Wham! 2x2 5 Gal	3360	gls	7 38	
Super Wham Bulk	3370	gls	6 86	
Stam Bulk	3400	gls	7 31	
Stam 35 gal	3420	gls	7 80	
Duet	3430	gls	7 33	
Propanex 35 gal	4310	gls	7 75	
Trisamine Alcohol	5340	lbs	3 77	
Propanil 360 35 gal	10010	gls	6 79	
Propanil 360 210 L	10020	gls	6 79	
Propanil 360 200 L	10030	gls	6 79	
Supernox 360 200 L	10040	gls	6 79	
Supernox 480 200 L	10050	gls	7 75	
Butox 200 Bulk	15200	gls	10 25	
Butox 175	15240/15260	gls	10 80	
Butox 200	5530/15540/1556	gls	12 28	
Butoxone 7500 DF	15680	Bag	13.65	
Pluck 2x2 5	15700	gls	22 87	
Pluck 4x1	15710	gls	22 87	
Pluck Bulk	15720	gls	23 11	
Pluck 30	15730	gls	22 87	
Ethephon	15740	lbs	1 24	
Tromethamine Bulk	17000	lbs	3 77	
Tham 25 Kg	17020	lbs	3 77	
Pure Tromethamine 25 Kg	17120	lbs	3 77	
Tromethamol 25 Kg	17220	lbs	8.39	
Pure Tromethamine 50 Kg	17230	lbs	3 77	
Tromethamol 50 Kg	17240	lbs	8 39	
Tns Ultra Pure 100 Kg	17250	lbs	8 22	
Pure Tns-Hcl 100 Kg	17260	lbs	22 50	
Tns Ultra Pure 25 Kg	17270	lbs	10 45	

R/M's Standard	Item No	Unit	Per Unit
Product			
DCA	40100	lbs	1 05
DOP	40150	lbs	2 36
P Acid	40200	lbs	28
P Anhydr	40300	lbs	.92
MO	40400	lbs	59
Isophor	40500	lbs	68
Emul	40600	lbs	70
Dowfax 382	40700	lbs	7 52
Tenn 500	40800	lbs	15
Armul	40900	lbs	.78
TM-2 Emulsifier	40910	lbs	1 65
PolySolv	40920	lbs	71
MCPA-IOE	40930	lbs	1 78
QDCB	41000	lbs	37
Sulfonic Acid	41010	lbs	04
Nitric Acid	41020	lbs	16
Hydrogen	41030	lbs	1 20
Platinum	41040	tr ozs	393 00
Soda Ash	41050	lbs	13
Lime	41060	lbs	07
Plat Cat	41070	lbs	88 00
Isoph/Mibk	41080	lbs	52
Hydrogen Peroxide	41090	lbs	34
Xylene (Cedar)	41200	lbs	19
Mibk	41300	lbs	47
Vangel	41450	lbs	1 37
Morewet	41460	lbs	1 08
Polyfon	41470	lbs	62
Glycer	41480	lbs	45
Alkonic	41490	lbs	78
Hi Sil	41500	lbs	83
Ketzan	41510	lbs	5 30
Sulfonic Acid 93%	41520	lbs	04
Caustic 50%	41530	lbs	08
Formaldehyde	41540	lbs	11
2,4 D-B Acid	41550	lbs	4 68
Carbon Bisulfide	41560	lbs	28
Veegum	41570	lbs	1 85
60% DMA	41580	lbs	60
Citric Acid	41590	lbs	92
Step-spense DF 200	41600	lbs	1 27
Stepwet DF 85	41610	lbs	2 48
Continental Clay	41620	lbs	08
Morpholine	41630	lbs	1 06
Sun 7N Od	41640	lbs	18
Anhydrous DMA	41650	lbs	64
High Purity Heptane	41660	lbs	21
Technical Carbyl	41670	lbs	3 75
Ethephon	41680	lbs	3 37
Sorprophor 4d384	41690	lbs	1 87
Mixed Nitrating Acid	41700	lbs	11
Acetic Anhydride	41710	lbs	.38
Ethylene Dichloride	41720	lbs	22
Proxel QXL	41730	lbs	5 12
Perkone D	41740	lbs	33
5 gal/20 L Pts	42000	ea	3 85
30 Mts	42100	ea	15 85
Stam 35	42200	ea	17 90
35 m's	42210	ea	19 50
35 m's Plastic/Stam	42220	ea	15 00
35 m's Plastic/Prop	42230	ea	15 00
55 m's	42300	ea	22 05
55 m's Plastic	42500	ea	22 50
55 m's Crystal Litho	42550	ea	21 60
MTPO Drums	42600	ea	25 55

Sodium Hypo	42810	lbs	08
Product	Item No	Unit	Per Unit
Caustic 30%	42620	lbs	.07
Methyl Mercaptan	42630	lbs	78
Methanol 99%	42640	lbs	13
Hydroxamine Sulfate	42650	lbs	1 00
Caustic 17%	42660	lbs	03
Hydrochloric Acid	42670	lbs	05
Nitromethane 99 5%	42680	lbs	1 38
Nickel Catalyst	42690	lbs	7 63
DMA 40% Solution	42700	lbs	47
Unpacks	44000	ea	2 88
Jugs-1 Gal Plastic	44100	ea	43
Jugs-2 5 Gal Plastic	44200	ea	1 36
Antifoam AF 9000	45000	lbs	9.60
Acetone	45010	lbs	35
Dimethylpropionic	45020	lbs	2 63
Glycerol Monostearate	45030	lbs	71
Mistacure T-1 Catalyst	45040	lbs	12 28
Methyldiethanolamine	45050	lbs	2 15
Proxel GXL Biocide	45060	lbs	5 20
Toulene Diisocyanate	45070	lbs	1.33
20% Rayon Grade Caustic	45080	lbs	11
50% Caustic	45090	lbs	08 (Old Rayon Grade)
Arquad 16/29	45100	lbs	1 15
Anquar 2C75	45120	lbs	1 85
Ingafite Blue dye	45130	lbs	13 55
DC 1500 Antifoam	45140	lbs	8 30
Drum 55 gal Duxon Col	45150	ea	44 95
Butachlor	45200	lbs	2 35
Sodium Cyanide	45300	lbs	80
TEAB	45310	lbs	3 80
Tenneco 500/100	45320	lbs	18
36% Hcl	45330	lbs	10
Toluene	45340	lbs	15
Rock Salt	45350	lbs	19
Thionyl Chloride	45360	lbs	0 70
DMF	45370	lbs	0 85
Granular Salt	45380	lbs	0 12
55 mt Drums (Cyper)	45390	lbs	29.50
2-4 DB Acid 95%	46000	Kg	2 55
Metsulfuron Methyl 90%	46010	Kg	116 50
Acido Propionico Puro	46020	Kg	1 27
Acido Propionico Usado	46030	Kg	1 27
Diclorocarbena 98%	46040	Kg	3 00
Propanil Tech	46050	Kg	3 08
Criston 34	46060	Kg	2 28
Criston 180	46070	Kg	2 48
Acete Banana	46080	Kg	0 11
Oxido Mestilco	46090	Kg	2 08
Toluena	46100	Kg	0 79
Anhydrous Hydr Chloride	46200	lbs	0 70
Ethylene Oxide	46210	lbs	0 42
Phosphorus Trichloride	46220	lbs	0 42



5100 Poplar Avenue • Suite 2414 • Memphis, TN 38137 • (901) 685-5348 • Fax (901) 684-5398

May 17, 1999

Serge Ravet
Toll Manufacturing Manager
Rhone Poulenc
14-20 rue Baizet - B.P. 9163-69263
Lyon Cedex 09
France

Dear Serge,

Enclosed is an original of the secrecy agreement for the production of Cyclanilide, which has been signed on behalf of Cedar. We are looking forward to receiving the process description. We will keep you advised of our progress.

Regards,

A handwritten signature in black ink, appearing to read "Geoff Pratt", is written over a horizontal line.

Geoffrey Pratt

811988449725

ADEQ0015482

SECRECY AGREEMENT

This Agreement is made and entered as of the date last below written by and between

Rhône-Poulenc Agro Matières Actives, a French "société en nom collectif" with a capital of 640 250 000 French Francs with its registered office at: 14/20, rue Pierre Baizet - 69009 LYONS - FRANCE, registered in Lyon under number B 399 135 532,

Represented by Mr Hans MOSER, Strategic Purchasing Director, Business Development,

Hereinafter referred to as "RPAMA",

as the first Party,

And

Cedar Chemical Corporation, 5100 POPLAR Avenue, MEMPHIS, TN 38137 USA,

Represented by Mr Geoffrey L. PRATT, Vice President

Hereinafter referred to as "CEDAR",

as the second Party,

Witnesseth:

- ◆ WHEREAS, RPAMA and CEDAR own or have right to divulge certain valuable technical and proprietary information of a confidential nature, including manufacturing and formulation know-how (hereinafter referred to as « the Confidential Information »), for the manufacture and formulation of Cyclanilide or CS-DCA (1-(2,4-dichlorophenyliminocarbonyl)-cyclopropane carboxylic acid) from 2,4 DCA (2,4 Dichloro aniline) and CDM (cyclopropane-1,1-dicarboxylic acid dimethyl ether) (hereinafter referred to as "the Product").
- ◆ WHEREAS, RPAMA and CEDAR are interested in exchanging the Confidential Information for the purpose of evaluating their interest to enter into a toll manufacturing or purchase agreement, or any similar agreement, of the Product (hereinafter « the Purpose »).



ADEQ0015482

NOW, THEREFORE, in consideration of the premises and the terms and conditions herein contained the Parties have agreed as follows:

Clause 1. DEFINITIONS

"RPAMA" means RPAMA and its Affiliates.

"CEDAR" means CEDAR and its Affiliates.

« Third Party » means any Party other than RPAMA, Cedar and/or their Affiliates.

"Affiliate(s)" means any entity that directly or indirectly, through one or more intermediaries, now or hereafter controls or is controlled by or is under common control with a Party hereto, except in countries where ownership of a majority or controlling interest by a foreign entity is not permitted by law, rule or regulations, the parent's direct or indirect voting interest may be less than a majority or controlling interest.

"Control" (including the terms "controls" "controlled by", "controlling" and "under common control with") are understood as meaning the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person or entity whether through the ownership of voting security, by contract or otherwise.

Clause 2. SECRECY

- 2.1. Both Parties agree to keep secret and confidential any and all Confidential Information disclosed to it by the other Party and not to disclose such Confidential Information, in whole or in part, to any Third Party.
- 2.2. Each Party will disclose to the other Party only such Confidential Information that it is legally and contractually free to disclose, to the extent necessary to enable the other Party to assess its interest in the Purpose.
- 2.3. Each Party agrees to use the Confidential Information only for the Purpose as defined above and not to make any further use of the Confidential Information, commercially or otherwise, without the other Party's prior written consent.

- 2.4. Each Party agrees to limit the dissemination of the Confidential Information within its organization to those of its employees requiring the Confidential Information for the Purpose of the present Agreement. Each Party will ensure that such employees are informed of its obligations hereunder.
- 2.5. Each Party agrees to return promptly, free of charge, all of the Confidential Information which is in written form to the other Party at any time, upon the other Party's request.
- 2.6. Any documents, drawings, electronic media and other material containing any part of the Confidential Information shall be destroyed by shredding into pieces or returned to the other Party upon expiration or termination of this Agreement.
- 2.7. Each Party's obligations under this Agreement with respect to Confidential Information do not apply to that portion of Confidential Information which beneficiary Party can prove :
- at the time of the disclosure are generally available to the public; or
 - after the time of disclosure become generally available to the public through no fault of the receiving Party; or
 - the receiving Party can prove to have been in its lawful possession at the time of disclosure by the other.
- 2.8. The said Confidential Information shall not be deemed to be within one of the foregoing exceptions if it is merely embraced by more general information available in the public domain or in the other Party's possession. In addition, any combination of features shall not be deemed to be within the foregoing exceptions merely because the individual features are in the public domain or in the other Party's possession.

Clause 3. LIMITATION OF RIGHT

- 3.1. Nothing herein contained shall be construed as granting to a Party any right, including any license, either express or implied, under any Confidential Information disclosed to a Party by another Party hereunder, except for a license

to use the Confidential Information to conduct the evaluation as contemplated by the Agreement.

- 3.2. Any commercial arrangement between the Parties regarding the Product shall be the subject of a separate agreement in writing.

Clause 4. DURATION

Unless terminated earlier or otherwise extended by mutual agreement in writing, this Agreement shall be effective as from the date of signature and shall terminate 1 (one) year later, except for the confidentiality and non-use obligations set forth in Clause 2. which shall last for 20 (twenty) years from the date of signature of this Agreement.

Clause 5. AMENDMENT

No amendment or consensual cancellation of this Agreement or any provisions or terms thereof and no extension of time or waiver or relaxation or suspension of any of the provisions or terms of this Agreement shall be binding unless recorded in a written document signed by the Parties. Any such extension, waiver or relaxation or suspension which is so given or made shall be strictly construed as relating to the matter in respect whereof it was made or given.

Clause 6. ENTIRETY

This Agreement contains the entire understanding between the Parties hereto regarding the subject matter hereof, and cancels and supersedes all previous agreements, representations and understandings, written or oral between the Parties hereto regarding the subject matter hereof.

L.
S. J.

Clause 7. ASSIGNMENT

The rights and obligations of this Agreement cannot be assigned to a Third Party by a Party without the prior written consent of the other Party.

Clause 8. APPLICABLE LAW

This Agreement shall be interpreted and construed in accordance with, and its performance shall be governed by French law.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed as of the day and year last below written.

Rhône-Poulenc Agro Matières Actives

Name : Hans MOSER

Title : Strategic Purchasing Director,

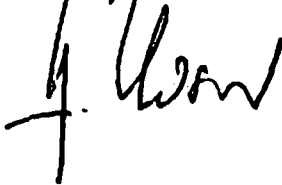
Business Development

Cedar Chemicals Corporation

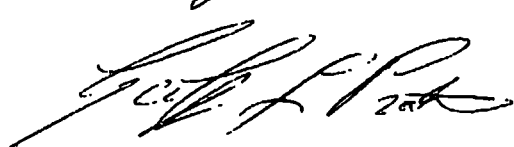
Name : Geoffrey L. PRATT

Title : Vice President

Date: 3 May 1999



Date: May 14, 1999



BrR

UNIT 5 SCRUBBER

VP-5401
Vacuum PumpCWR
E-5105

CWS

T-5203 MeOH Storage Tk

Distillations
are Flash
Distillations
only - no Column

TOLUENE

2,4 DCA

SODIUM
METHOX

CPDM

Sl CWR

Cond. CWS

E-5104

BrS

V-5317

P-5317

Reflux

C-5104
Coupling
ColumnWATER
96% H₂SO₄

Sl CWR

Cond CWS

R-5104
Coupling
Reactor

P-5104

R-5105
Hydrolys
Reactor

P-5105

C-5105
Hydrolysis
ColumnV-5312
Centrif.
Hold Tank

P-5312

CF-5701
Centrifuge

WATER WASH

Mother Liquor Storage

V-5701
Dryer Feed
Hopper

Bay

Rotary
VAC
COOL
VACD-5701
DryerV-5702
Dryer Disch
Hopper

Sifter

Product Drum

"Chunk" Drum

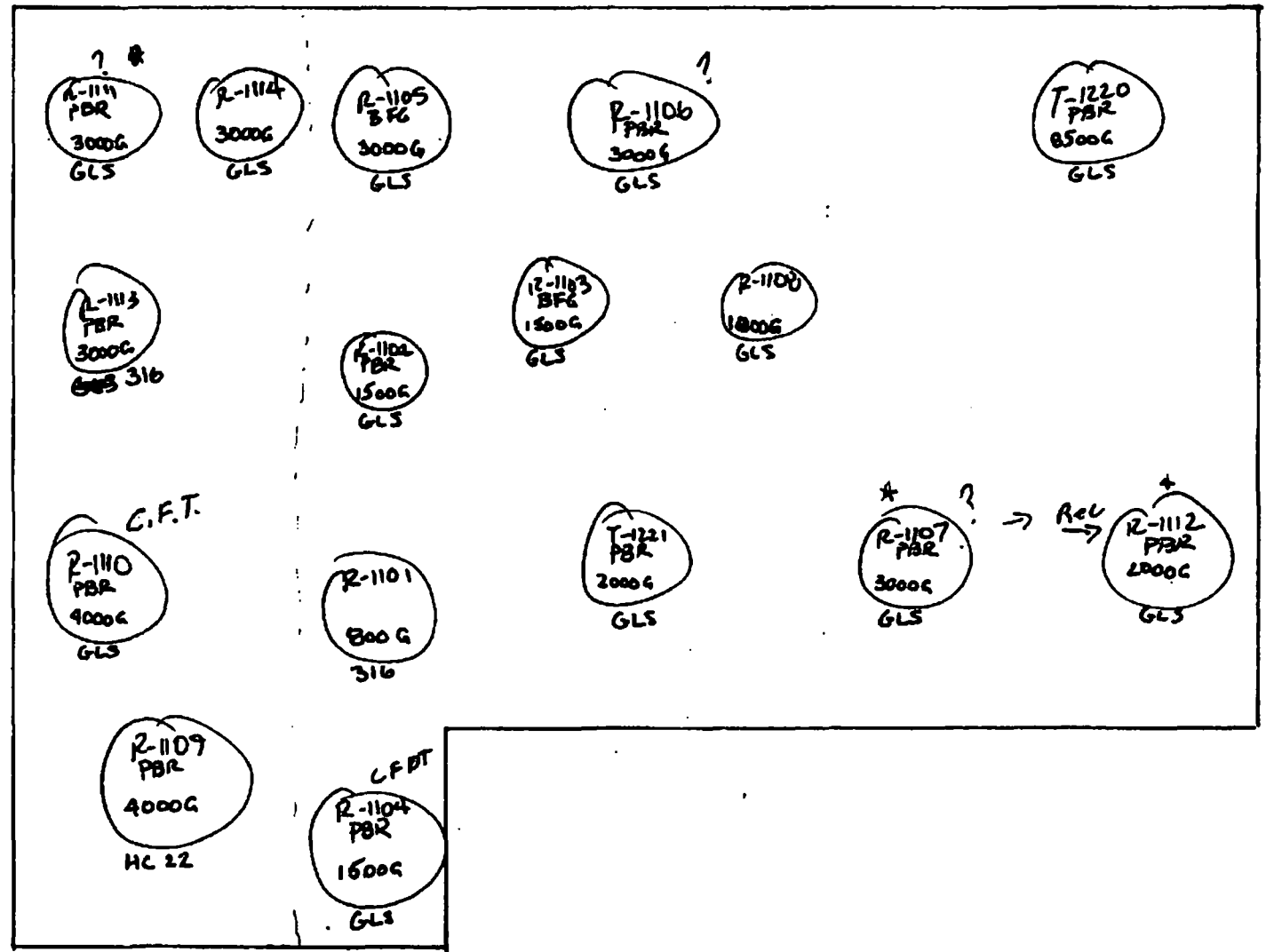
Rhone-Poulenc, Cyanilide RPA 90946
Process Flow Diagram
file c1 loyranilide 90946pdd_1.vsd

Revision: 0
Date 07/08/99
Drawn: DCG

distillation +
recovery of
toluene
OR. SOLT (RECYCLE TOLUENE?) (TOLUENE CARRYOVER?)

Stripper
Reflux
H₂O, S. H₂O out 5-10%
S. H₂O out 5-10%

AR00000099750



UNIT 1 VESSELS

7/14/99

RHONE POULENC CYCLANILIDE

	Base Case			Increased Productivity		
	Year			Year		
	2000	2001	2002	2000	2001	2002
Cedar Capital M-\$	750			625		
Plant Capacity M-Kgs	402			876		
Production M-Kgs	75	150	200	75	150	200
Production Time Days	58	132	180	21	58	81
Startup Time Days	30	14	7	30	14	7
Platn Prep. & CO Days	10	10	10	10	10	10
Total Days	98	156	197	61	82	98
Raw Materials \$3.56/kg	267	534	712	267	534	712
Waste Treatment 0 lb/kg	0	0	0	0	0	0
Price Inc. Capital Rec/Kg	25.59	20.49	19.45	17.71	12.61	11.57
Average 2000-2002		20.90			13.02	

Fee \$/day	
Startup	18
Normal	16

	Raw Materials		
	kg/kg	\$/kg R	\$/kg Prod
Sod Methoxide 25%	2.14	1.46	3.11
Sulfuric	0.18	1.56	0.28
Toluene	0.62	0.26	0.16
Total			3.56

7/14/99

T-208 P.03/03 F-778

+9016845398

Sep-09-99 10:37am From-CEDAR CHEMICAL

RHONE POULENC CYCLANILIDE

	Base Case			Increased Productivity		
	Year			Year		
	2000	2001	2002	2000	2001	2002
Cedar Capital M-\$	750			625		
Plant Capacity M-Kgs	402			878		
Production M-Kgs	75	150	200	75	150	200
Production Time Days	58	132	180	21	58	81
Startup Time Days	30	14	7	30	14	7
Platin Prep. & CO Days	10	10	10	10	10	10
Total Days	98	156	197	61	82	98
Raw Materials \$3.58/kg	267	534	712	267	534	712
Waste Treatment 0 lb/kg	0	0	0	0	0	0
Price Inc. Capital Rec/Kg	25.59	20.48	18.45	17.71	12.61	11.57
Average 2000-2002	20.90			13.02		

Fee \$/day		Raw Materials			
		kg/kg	\$/kg R	\$/kg Prod	
Startup	18				
Normal	16				
		Sod Methoxide 25%	2.14	1.46	3.11
		Sulfuric	0.18	1.56	0.28
		Toluene	0.62	0.26	0.16
		Total			3.56

Rhone Poulenc RPA 90946 (Cyclanilide)

Heat & Mass Balance

R.P. Basis 0.53 gallons (2 L)
 Cedar Basis 3,000.00 gallons (3,000 per train x 2 trains)
 Straight Line Multiplier 5,679.35

Assumptions:

1. Process overall 80% O.S.T.
2. Startup Adjustment Factor 80%
3. 0.5% Material Loss through drying
4. 0.5% Material Loss through centrifugation
5. Centrifugation C/T=45 minutes @ 300 lb./plow
6. Toluene is not recyded in the process.
7. ---
8. ---
9. ---
10. ---

I DRAW
ONLY

Do for
Free process

Summary of Results

Final Prod't lb/batch: 2,165 lb
 Limit'g Cycle Time: 22.0 hours
 Final Product lb/day: 2,362 lb/day

\$ 6.85 /lb to make \$15k/day

		COUPLING REACTION						HYDROLYSIS REACTION			ACIDIFICATION	
Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Initial Charge	Na Methylate Sol'n	Azeo Distillat'n	CPDM Charge	Rxn Generat'd MeOH	Coupling Product	Water Charge	MeOH Distillat'n	Hydroly's Product	H ₂ SO ₄ Charge	Wet Final Product
Component	MW											
Raw Materials												
CPDM	158.10				1,970.8							
2,4 DCA	162.00	2,040.9										
NaOCH3	54.00		741.1									
MeOH	32.00		2,223.3	2,223.3								
H2O	18.00							13,462.6			25.5	
H2SO4	98.00										610.8	
Toluene	92.15	17,191.1		5,187.8								
(By) Products												
Na-CPMPA	310.10						3,865.5					
MeOH	32.00					797.8			623.3			
Na-RPA 90946	296.10									3,691.0		
RPA 90946	274.10											2,186.7
Na2SO4	142.00										885.0	
Salts	--											
Others	--											
Total		19,232.0	2,964.4	7,411.1	1,970.8	797.8	3,865.5	13,462.6	623.3	3,691.0	1,521.3	2,186.7
Stream Weight (lb/batch)												
Stream Volume (gal)		2,886.0						1,616.2				
Temperature (°F)		77.0	77.0	147.2	68.0		230.0	77.0	212.0	68.0	77.0	77.0
Pressure (psia, {torr})		14.7	14.7	{400}	14.7	{400}	14.7	14.7		14.7	14.7	14.7
S.G.		0.8										
Cycle Time (hr)							16.0			5.0		1.0

"Front End"
Time Cycle

22.0

Print Date: 10/11/99

File: 90946 MASS BAL.xls

AR0000099748

Rhone Poulenc RPA 90946 (C)
Heat & Mass Balance

R.P. Basis 0.53
 Cedar Basis 3,000.00
 Straight Line Multiplier 5,679.35

Assumptions:

1. Process overall 80% O.S.T.
2. Startup Adjustment Factor 80%
3. 0.5% Material Loss through drying
4. 0.5% Material Loss through centrifugation
5. Centrifugation C/T=45 minutes @ 300 lb./plc

ISOLATION & DRYING

Stream No.		12	13	14	15	16				
Description		From Centrifug'n	Vent from Dryer	Dried Final Product	Total Waste	Waste w/Tol Recycle	Totals	Mol Totals		
Component	MW									
Raw Materials										
CPDM	158.10						1,970.8	12.5		
2,4 DCA	162.00						2,040.9	12.6		
NaOCH ₃	54.00						741.1	13.7		
MeOH	32.00						2,223.3	69.5		
H ₂ O	18.00	13,488.1	13,477.3	10.8	40,464.2	80,928.5	40,464.2			
H ₂ SO ₄	98.00						610.8	6.2		
Toluene	92.15				17,191.1	2,578.7				
(By) Products										
Na-CPMPA	310.10						3,865.5	12.5		
MeOH	32.00				3,644.4	3,644.4	1,421.1	44.4		
Na-RPA 90946	296.10						3,691.0	12.5		
RPA 90946	274.10	2,175.8		2,164.9						
Na ₂ SO ₄	142.00				885.0	885.0	885.0	6.2		
Salts	—									
Others	—									
Total		15,663.9	13,477.3	2,175.7	62,184.8	88,036.5				
Stream Weight (lb/batch)										
Stream Volume (gal)										
Temperature (°F)		68.0	212.0	212.0						
Pressure (psia, (torr))		14.7	14.7	14.7						
S.G.										
Cycle Time (hr)		5.5	12.0							

"Back End"

Time Cycle

17.5



Memorandum

To: David Guffey
CC:
From: Geoff Pratt
Date: October 28, 1999
Re: Rhone-Poulenc Information

David:

These procedures will be needed for the lab trials for cyclanilide.

GP:MG

Copy
GREG S.
DOC (TONY)
CHRIS M.
JIM R.



Rhône-Poulenc Agro

**CEDAR
Mr Geoffrey L. PRATT
5100 Poplar Ave.
Suite 2414
Memphis, TN 38137
UNITED STATES**

Lyon, la **25th October 1999**

Réf : fb/SR 180.99

Dear Geoffrey,

Following our meeting in Memphis in October, you will find herewith the analytical procedures implemented in the Cyclanilide dosage :

- Document : R&D/CRLD/AN/ Reference 9516131- 26/07/95
Method C-821-07-95 (E)**
- Document : R&D/CRLD/AN/ Reference 9515907- 20/06/95
Method C-817-06-95 (E)**
- Document : R&D/CRLD/AN/ Reference 9515902- 20/06/94
Method C-816-06-95 (E)**

A new method by CPG will be developped soon in replacement of the present one used to dose 2,4 – DCA.

The samples of CPDM, 2,4 – DCA and Cyclanilide has been ordered and will be sent directly to your West Helena plant within 2 weeks.

Best regards.

A handwritten signature in black ink, appearing to read 'Serge Ravet', written over a horizontal line.

**Serge RAVET
Toll Manufacturing Manager**

Copie : Pierre LEROY



Memorandum

To: David Guffey
CC:
From: Geoff Pratt
Date: October 28, 1999
Re: Rhone-Poulenc Information

David:

These procedures will be needed for the lab trials for cyclanilide.

GP:MG

Copy
GROSS S.
DOC (TONY)
CHRIS M.
JIM R.



RHONE-POULENC

BUSINESS CONFIDENTIAL

RHÔNE-POULENC SECTEUR AGRO	Department: R&D/CRLD/AN	Reference : 9515902	DOC Nr : 438656
			Date : 20/06/94
			GOoD ID: 8057
External Performer(s) :			

Author(s) :

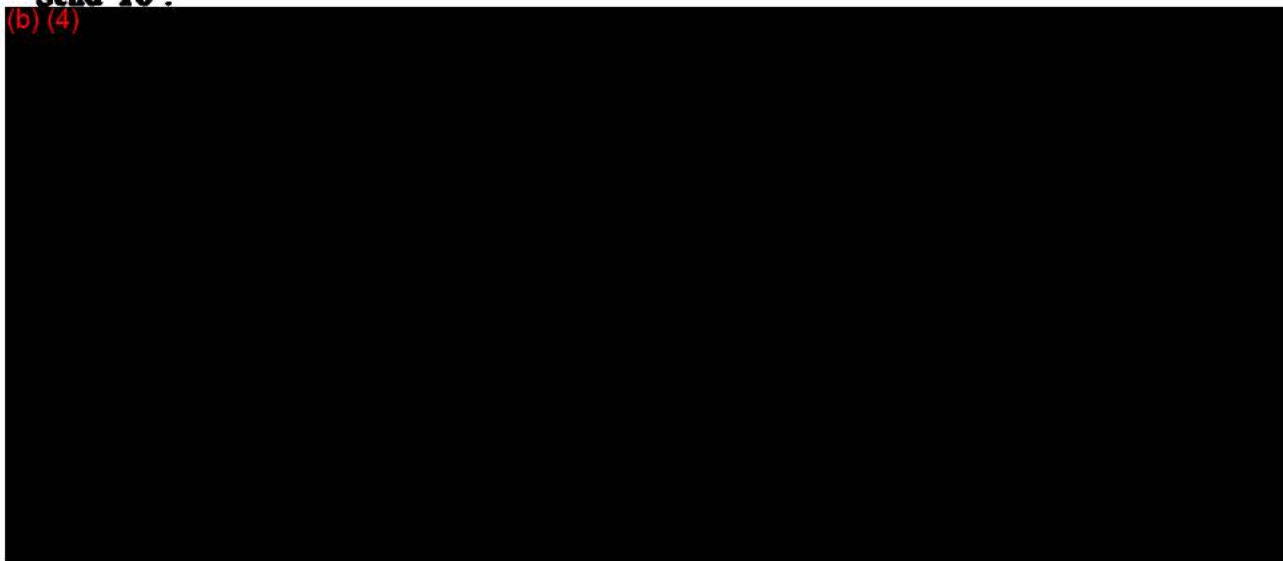
Internal : J. COUSIN, J. PERNET and R. REYNAUD

External :

Title : Technical Cyclanilide - GC determination of methanol and toluene

Send To :

(b) (4)





RHÔNE-POULENC

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SECTEUR AGRO

RHÔNE-POULENC AGROCHIMIE
14-20 RUE PIERRE BAIZET B.P. 9163
69263 LYON CEDEX 09
TEL. 72.29.25.25 - FAX 72.29.29.67
TLX 306147 F RHÔNE

**Technical Cyclanilide
GC determination of
methanol and toluene**

**Research and Development
Centre de Recherche de La Dargoire**

Method C-816-06-95 (E)

Date : 20/06/1995

Authors : R. REYNAUD

J. PERNET

Approved by : J. COUSIN

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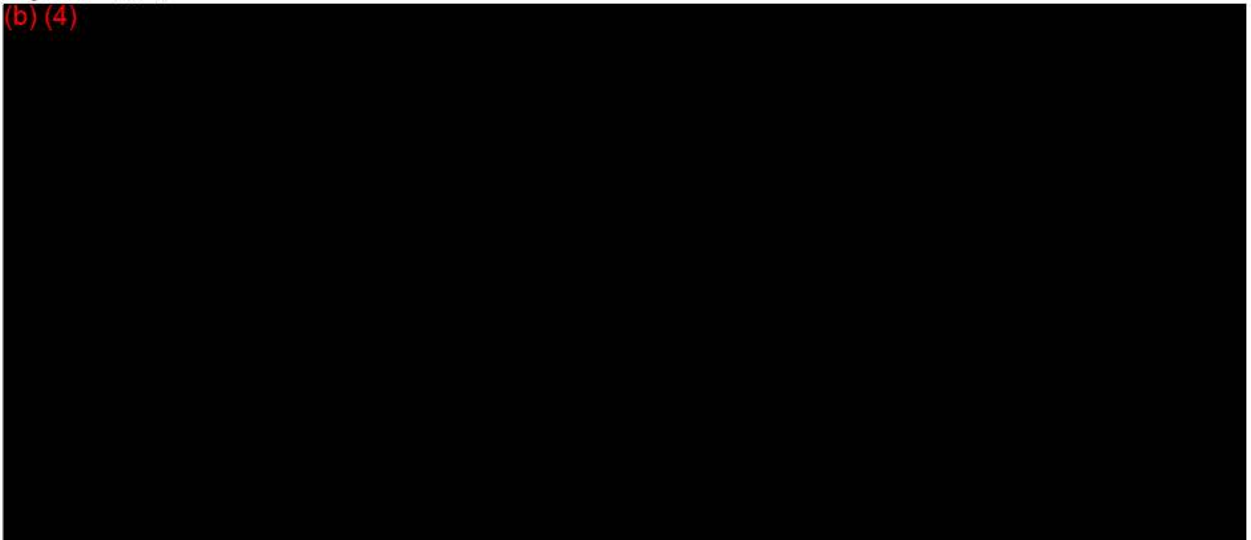
Copy
GREEN S.
DOC (TONY)
CHRIS M.
JIM R.



RHÔNE-POULENC SECTEUR AGRO	Department:	Reference :	DOC Nr : 438656
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			GOoD ID: 8057
External Performer(s) :			

Author(s) :**Internal :** J. COUSIN, J. PERNET and R. REYNAUD**External :****Title :** Technical Cyclanilide - GC determination of methanol and toluene**Send To :**

(b) (4)





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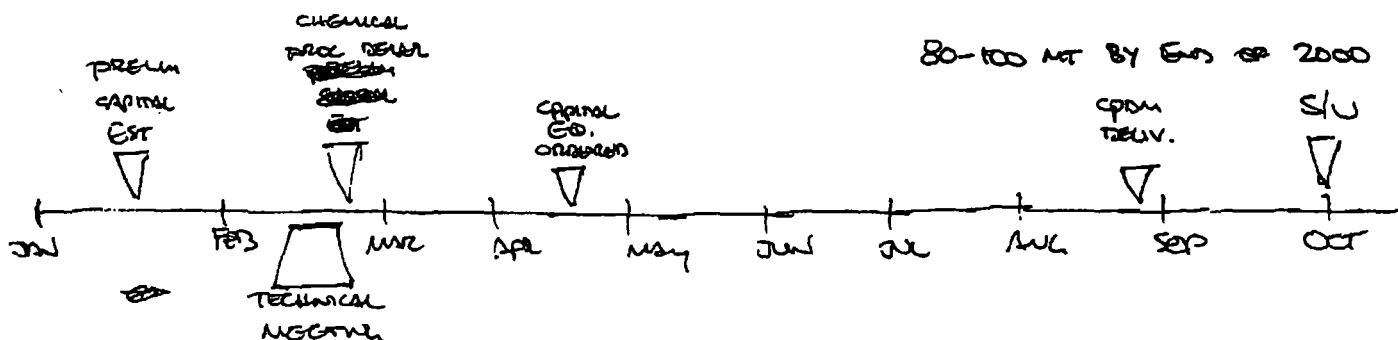
DECUSSA PLANT = PILOT UNIT, NOT DESIGNED SPECIFICALLY FOR THE RP PROCESS

DECUSSA PROCESS LIC. TO RP.

Today Discussion of Chemistry

1st point → USE Xylene instead of Toluene
2nd → USE 100% ^{KOH} ~~Alcohol~~ instead of Methoxide

⊗ RP METHOD FOR Coupling IS BETTER (A/I)
- DETERMINE WHICH IS BETTER



RP PROCESS - ADD NaOH BUT MUST CONTROL TEMP TO AVOID DEGRADATION PRODUCTS.

~~QUESTIONS FOR THE GROUP~~

LEAVING SOME NaOH IN ACTIVATION MAY HELP CRYSTALLIZATION

⚡ AFTER OPDM ADDN - NO SALT PRECIPITATES - STIRRING IS CRUCIAL

NEED 10 THERM PLATES FOR NaOH SOL & NaOH STRIPS

QUALITY OF R/M SHOULD BE CHECKED

ACTION ITEMS

1. TEST XYLENE VS. TOLUENE W PROCESS
* WHO: _____
* WHEN: _____
2. TEST KOH/MeOH VS. METHOXIDE (SOLID KOH OR KOH W MeOH?)
* WHO: _____ } THEN HAVE TO DO RP METHODS w/
* WHEN: _____ } KOH
3. DISCUSS RP VS. DEGUSSE COUPLING PROCEDURES -
RP - 85% DEGUSSE, 90% RP → TONY - 90% DEGUSSE, 85% RP
* WHO: _____
* WHEN: _____
4. DETERMINE METHODS OF ANALYSIS FOR HYDROLYSIS - GC OF ESTER
IN TOLUENE OR pH.
* WHO: _____
* WHEN: _____
5. DETERMINE ACIDS TO USE FOR ACIDIFICATION - FORMIC VS.
SULFURIC VS. PHOSPHORIC VS. PROPIONIC
* WHO: _____
* WHEN: _____
6. DOE FOR CRYSTALLIZATION - DEPENDENT
* WHO: _____
* WHEN: _____
7. LAB RUN w/ RP & DEGUSSE PROCESSES TO GENERATE
FULL MATERIAL BALANCE
* WHO: _____
* WHEN: _____

8. GENERATE SERIES 61 & SERIES 62 Document
For EPA

→ PROCESS DESCRIPTION
→ PROCESS CHEMISTRY

* WHO

* WHEN: BY 01 SEP 00

→ HAS PUMP SAMPLES (5) FOR DOSSIER

→ HAVE PRELIMINARY DOCUMENT BY MARCH 00
(DEFINE OPERATING CONDITIONS - SERIES 61)



Internal Correspondence

To: Chris McGee, Jim Rone
CC: A. Dinculescu
From: David C. Guffey
Date: 14 December 1999
RE: Cyclanilide 90946 Process—Process Technology Questions

Following are questions from the Rhone-Poulenc process for generation of RP-90946:

A. Coupling

1. What are purchase specs for Toluene (especially water content)?
2. Use mixed Xylenes instead of Toluene—No MeOH azeotrope. Issues?
3. How many theo stages req'd for Toluene/MeOH distillation?
4. What happens if MeOH left in reactor?
5. Third and last ¶'s of Section 5.1.5 of "Merit Note" Rev. 0, indicates final pot temp of 110°C for complete MeOH removal—is this a separate heat up step or a normal ramp-up of temperature during the final MeOH distillation?
6. When Na-CPMPA precipitates in solution—what is density and viscosity of resulting slurry?
7. Toluene/MeOH azeotrope waste or break azeotrope in Toluene recovery?
8. What is vacuum utilized for MeOH strip—controlled or FV?
9. Does Azeo strip require vacuum?
10. What increases/decreases the reaction of 2,4 DCA with the second ester group to form impurity n°6?

B. Hydrolysis

1. What are effects of too much / too little water?
2. Max Temperature listed as 100°C—what happens if temperature exceeded?
3. What is density and viscosity of resulting aqueous slurry?
4. Is there a rag layer in the decant process?
5. If there is a rag layer, does it go with the aqueous or organic phases?
6. Distillation column required for MeOH removal?
7. What happens if all MeOH not removed?

C. Acidification

1. Acidification step—stop before 1-1.5—what happens.
2. After acidification step—can we bring pH back to 4-5 from 1-1.5?

D. Isolation & Drying

1. Corrosion data for 316 stainless steel at pH 1-1.5?
2. Corrosion data for Hastelloy C-22 and/or C-276 at pH 1-1.5?
3. Bulk Density of Wet Solids from Centrifugation?
4. Bulk Density of Dry Solids?
5. What kind of dryer currently used? Operating conditions? Cp of the RP-90946?
6. What happens if dryer temperature exceeded?
7. What is melt point of solid?

8. Is the product thermally stable—R&D tests?

E. Toluene Recovery

1. What are details of toluene recovery—i.e. equipment utilized, operating conditions, stream compositions, recovered toluene specs, etc.
2. How many theo. stages required?
3. What is overall toluene recovery?

F. Waste Disposal

1. Typical composition of aqueous waste stream?
2. Typical composition of organic waste stream?

Rhone-Poulenc RPA 90946 (Cyclanilide)
Major Equipment Identification

<u>Service</u>	<u>Equip. No.</u>	<u>Train A</u>		<u>Equip. No.</u>	<u>Train B</u>	
		<u>Mat'l Const.</u>	<u>Capacity</u>		<u>Mat'l Const.</u>	<u>Capacity</u>
Premix Tank	R-1102	GLS	1500 gal	R-1104	GLS	1500 gal
Coupling Reactor Coupling Column	R-1106	GLS	3000 gal	R-1107	GLS	3000 gal
Hydrol./Acid'n Rxtr H/A Column	R-1110	GLS	4000 gal	R-1111	GLS	3000 gal
Centrifuge Feed Tk	R-1109	Hast-C	4000 gal	N/A	N/A	N/A
Centrifuge	CF-1254 ¹⁴⁰⁵	Hast-C	48"x30" P/B	N/A	N/A	N/A
Dryer	D-7100	304 SS	7 cu. Meter	N/A	N/A	N/A
Scrubber	C-1401	CS/FRP	N/A	N/A	N/A	N/A
Toluene Recovery Still Pot	TBD			N/A	N/A	N/A
T/R Column	TBD			N/A	N/A	N/A
Water Recovery Still Pot	TBD			N/A	N/A	N/A
T/R Column	TBD			N/A	N/A	N/A

Rhone-Poulenc RPA 90946 (Cyclanilide)**Major Equipment Identification**

<u>Service</u>	<u>Equip. No.</u>	<u>Train A</u>		<u>Equip. No.</u>	<u>Train B</u>	
		<u>Mat'l Const.</u>	<u>Capacity</u>		<u>Mat'l Const.</u>	<u>Capacity</u>
Premix Tank	R-1102	GLS	1500 gal	R-1104	GLS	1500 gal
Coupling Reactor Coupling Column	R-1106	GLS	3000 gal	R-1107	GLS	3000 gal
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Centrifuge Feed Tk	R-1109	Hast-C	4000 gal	N/A	N/A	N/A
Centrifuge	F-1254	Hast-C	48"x30" P/B	N/A	N/A	N/A
Dryer	D-7100	304 SS	7 cu. Meter	N/A	N/A	N/A
Scrubber	C-1401	CS/FRP	N/A	N/A	N/A	N/A
Toluene Recovery Still Pot	TBD			N/A	N/A	N/A
T/R Column	TBD			N/A	N/A	N/A
Water Recovery Still Pot	TBD			N/A	N/A	N/A
T/R Column	TBD			N/A	N/A	N/A

Rhone Poulenc RPA 90946 (C)

Heat & Mass Balance

R.P. Basis 0.53
Cedar Basis 1,775.00

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 12% LOD
4. Centrifugation Cycle=45 minutes @ 300 lb./p
5. Dryer discharge at 0.5% LOD

		ISOLATION & DRYING				SOLVENT RECOVERY		WASTE			
Stream No.		12	13	14	15	16	17	XX	XX		
Description		Mother Liquor Discharge	Wet Prod't to Dryer	Vent from Dryer	Dried Final Product	Toluene to Recycle	Recycled Toluene	Organic Waste	Aqueous Waste		
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH ₃	54.00										
MeOH	32.00										
H ₂ O	18.00	7,673.0	206.7	199.9	6.9	15.5		15.5	7,872.8		
NaOH	40.00										
H ₂ SO ₄	98.00										
Toluene	92.15					9,672.4	8,606.1	1,565.4			
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00							2,018.8			
Na-RPA 90946	296.10										
RPA 90946	274.10		1,722.9		1,378.3						
Na ₂ SO ₄	142.00	658.8							658.8		
Others	---					285.0		285.0			
Stream Weight, lb/batch		8,331.7	1,929.6	199.9	1,385.2	9,972.9	8,606.1	3,884.6	8,531.6		
Stream Volume, gal {ft ³ }		1,000.2		30.0		1,381.4	1,192.0	565.2	975.4		
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0		
Pressure, psia {torr}		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7		
Density, g/cc {lb/ft ³ }		1.00		0.80		0.87	0.87	0.83	1.05		
Viscosity, cP (cSt)											
Molar Yield {Overall}					(68.2%)						

Rhone Poulenc RPA 90946 (Cyclanilide)

Heat & Mass Balance

R P. Basis 0.53 gallons (2 L)
Cedar Basis 1,775.00 gallons (3,000 per train x 3 trains)

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 12% LOD
4. Centrifugation Cycle=45 minutes @ 300 lb./plow
5. Dryer discharge at 0.5% LOD
6. All Yield calculations based on CPDM
7. ---
8. ---
9. ---
10. ---

Summary of Results

Final Product lb/bx. 1,378 lb
Limiting Cycle Time: 21.6 hours
Final Product lb/day: 1,534 lb/day

		COUPLING REACTION						---HYDROLYSIS REACTION---			---ACIDIFICATION---	
Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Initial Charge	Na Methylate Sol'n	Azeo Distillat'n	CPDM Charge	Rxn MeOH-Distillat'n	Coupling Product	Water Charge	Rxn MeOH-Distillat'n	Hydroly's Product	H ₂ SO ₄ Charge	Final Product Slurry
Component	MW											
Raw Materials												
CPDM	158.10				1,166.0							
2,4 DCA	162.00	1,207.5										
NaOCH ₃	54.00		438.5									
MeOH	32.00		1,315.5	1,315.5								
H ₂ O	18.00							7,806.1		7,806.1	18.9	7,880.7
NaOH	40.00							158.2				
H ₂ SO ₄	98.00										454.7	
Toluene	92.15	10,171.4		499.0			9,672.4			9,672.4		
(By) Products												
Na-CPMPA	310.10						2,241.4					
MeOH	32.00					472.0			231.3			
Na-RPA 90946	296.10									2,033.2		
RPA 90946	274.10											1,731.5
Na ₂ SO ₄	142.00										658.8	658.8
Others	---						44.8			101.7	138.5	
Stream Weight, lb/batch		11,378.9	1,754.0	1,814.4	1,166.0	472.0	11,958.6	7,964.3	231.3	19,613.3	1,270.9	10,271.0
Stream Volume, gal (ft ³)		1,575.8	222.8	268.2	122.0	71.6	1,656.0	956.1	35.1	2,541.8	117.4	1,233.0
Temperature, °F		77.0	77.0	146.3	68.0	148.5	230.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia (torr)		14.7	14.7	{400}	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft ³)		0.87	0.95	0.81	1.15	0.79	0.87	1.00	0.79	0.93	1.30	1.00
Viscosity, cP (cSt)												
Molar Yield (Overall)							98.0%			95.0%		92.0%

Rhone Poulenc RPA 90946 (Cyclanilide)—DeGussa-Huls Technology Basis

Cycle Time Analysis

Step Cycle
Time

Vessel Cycle
Time

Rate Limiting
Time
19.5 hours

Premix Prep (R-1) Charge Toluene 0.1
Unit 1 Charge 2,4 DCA 0.7 [Drum]
R-1102, R-1104 Mix/Hold 0.5

Σ = 1.3

Coupling Reaction (R-2) Charge Premix 0.3
Unit 1 Draw Vacuum 0.3
R-1106, R-1107 Heat to 56-59°C 0.8
Charge Na Methoxide ~~8.0~~ 3.0
Distill MeOH/Toluene Azeotrope 2.0
Cool to 60-65°C 1.0
Charge Water 0.2
Transfer to Hydrolysis Rxtr 1.0

Σ = 8.6 or 17.2 for 2 trains
~~13.6~~

Hydrolysis Reaction (R-3) Charge Water 1.0
Unit 1 Heat/Reflux 5.0
R-1110, R-1111 Distill MeOH 1.0
Cool Rxtr <50°C 1.0
Sample/NaOH Adjust 5.0
Phase Separate / Transfer 1.0
Acidification (R-4) Cool >25°C 1.0
R-1110, R-1111 Charge Formic Acid 3.0
Mix 0.5
Sample/Results 0.5
Transfer 0.5

Σ = 19.5

Centrifugation (R-5) Centrifuge Batch 6.1
R-1109

Σ = 12.2

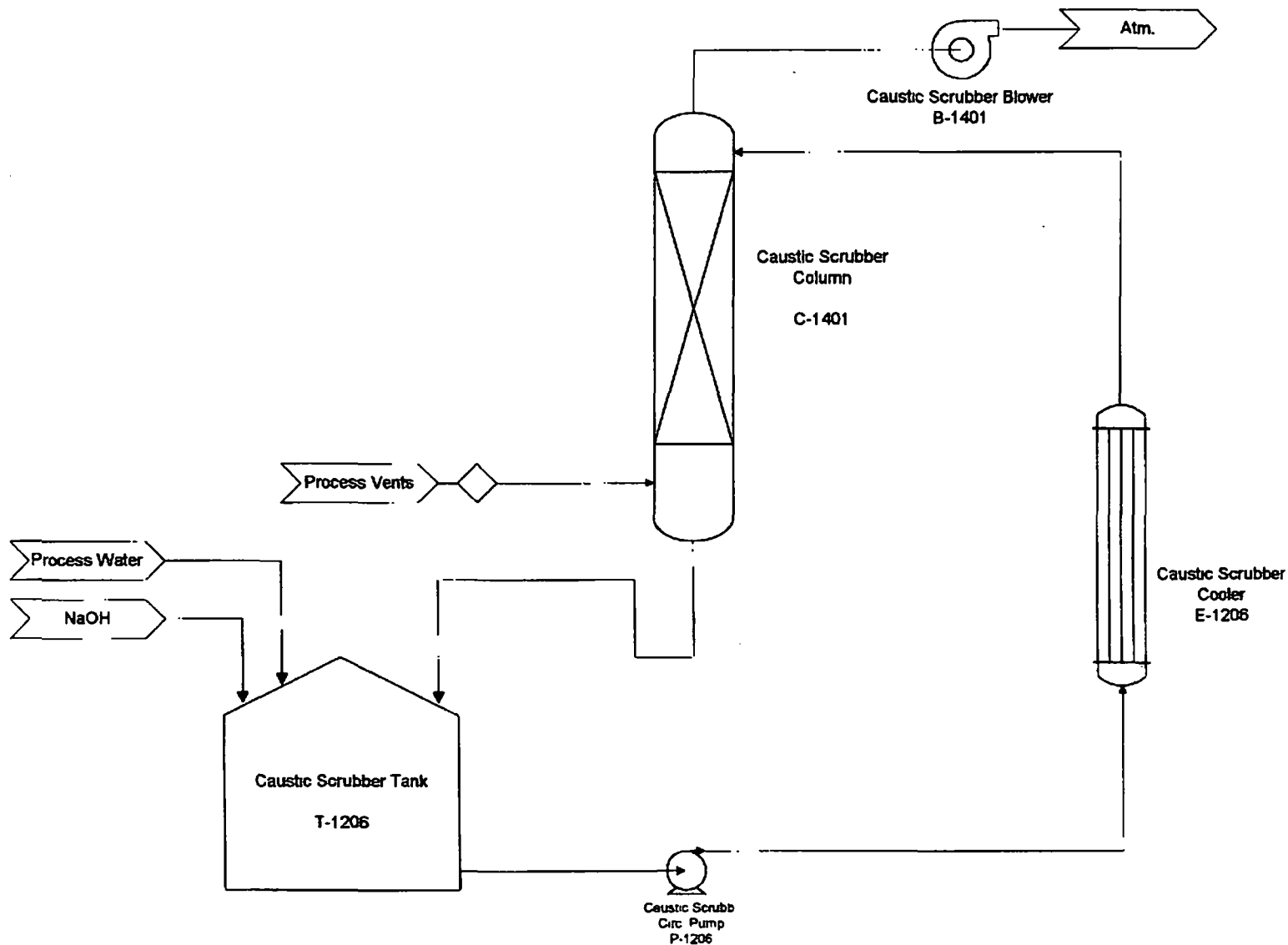
Drying Charge 1.5 batches 1.0
Dry Batch 8.0
Packout 1.5

Σ = 10.5

Note.

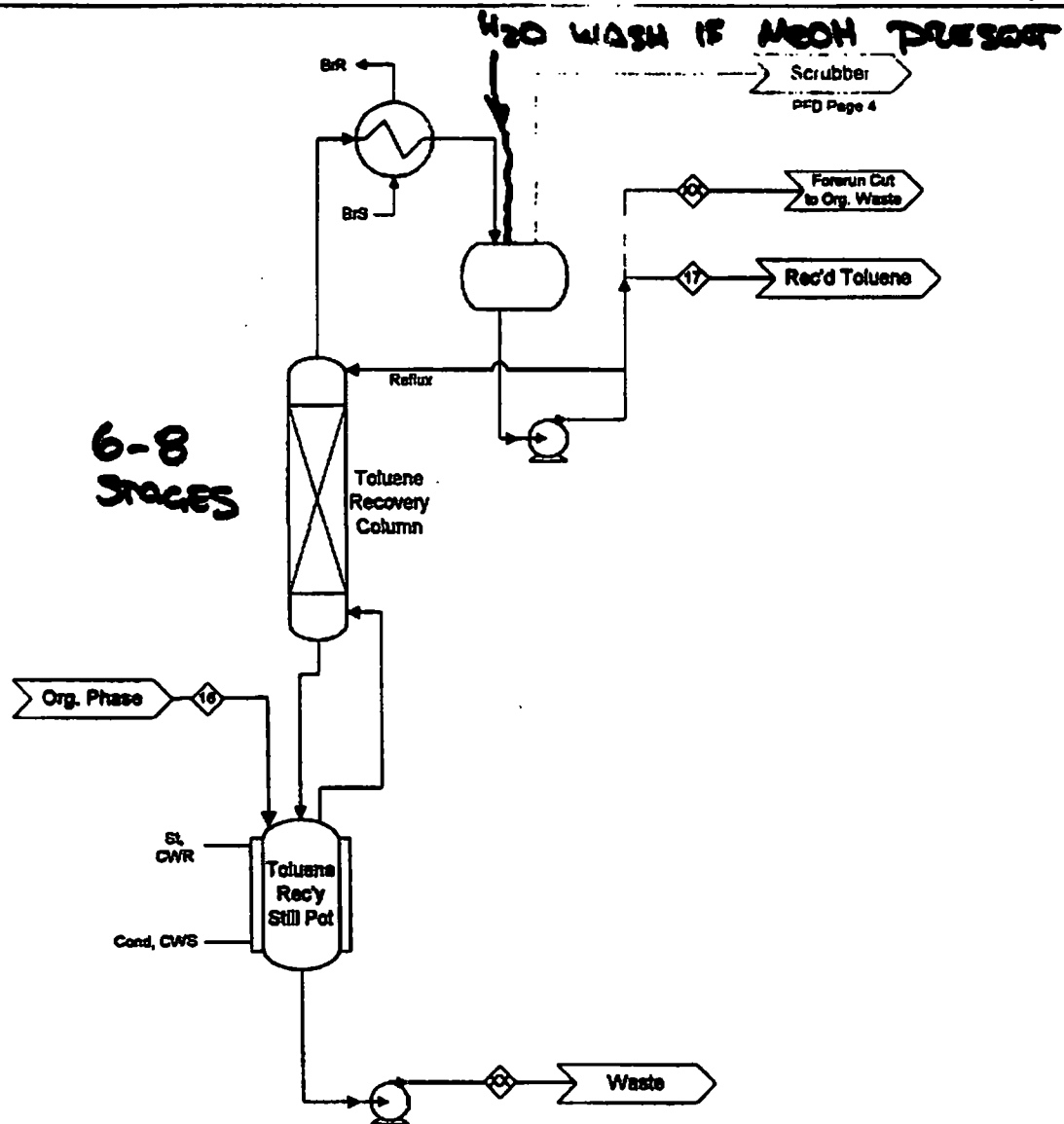
nn.n indicates calculated value,
otherwise value is estimated

Total Batch Time Req'd 57.1 hours



Title: Cyclanilide 90946 Process Flow Diagram
Page 4 of 4 Pages

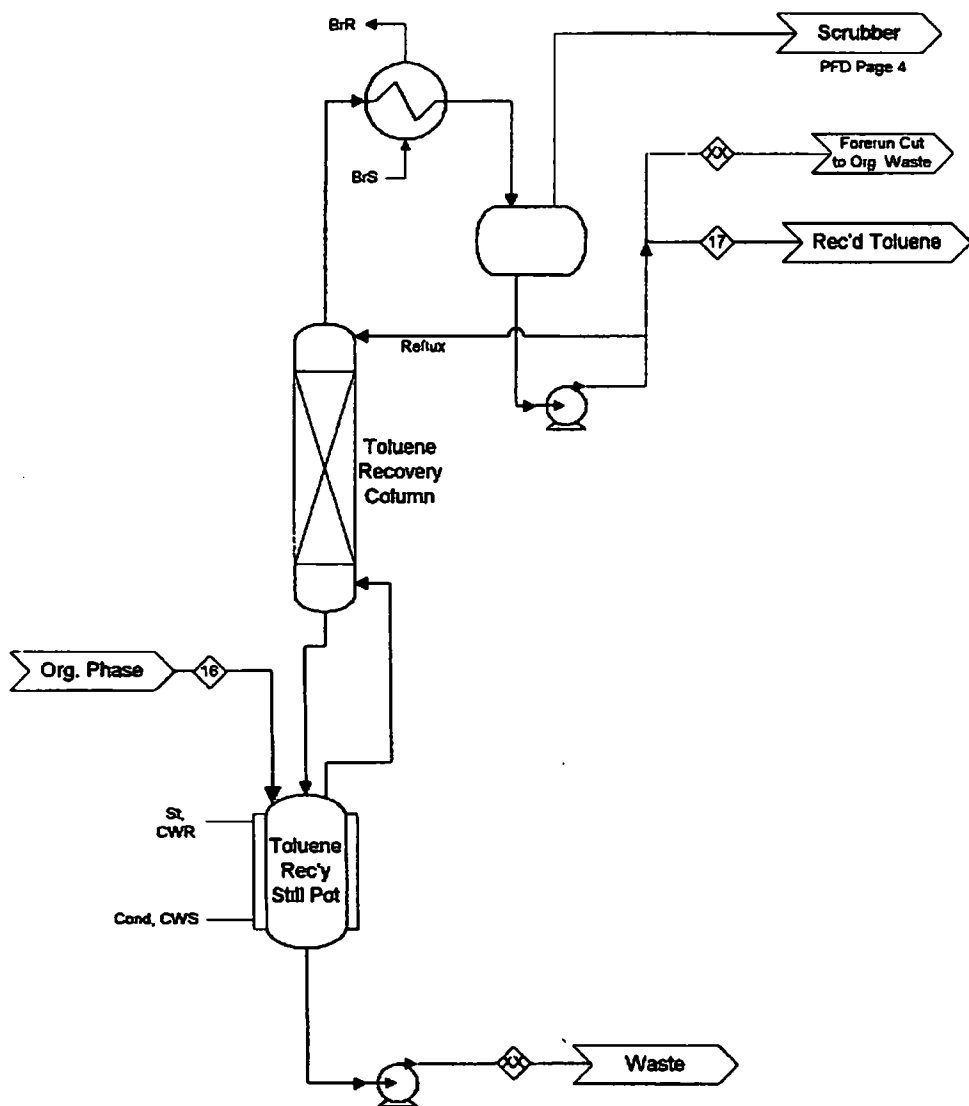
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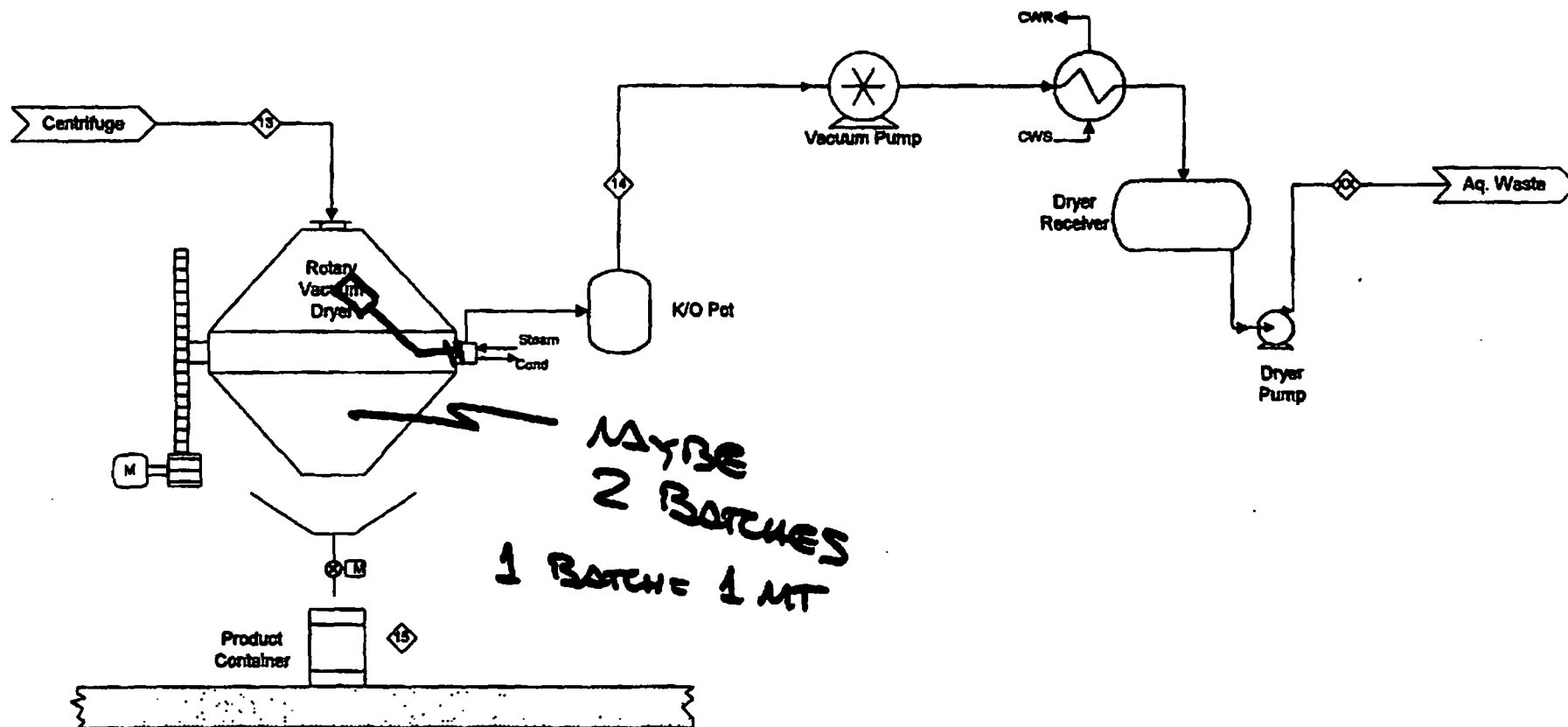
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Page 3 of 4 Pages

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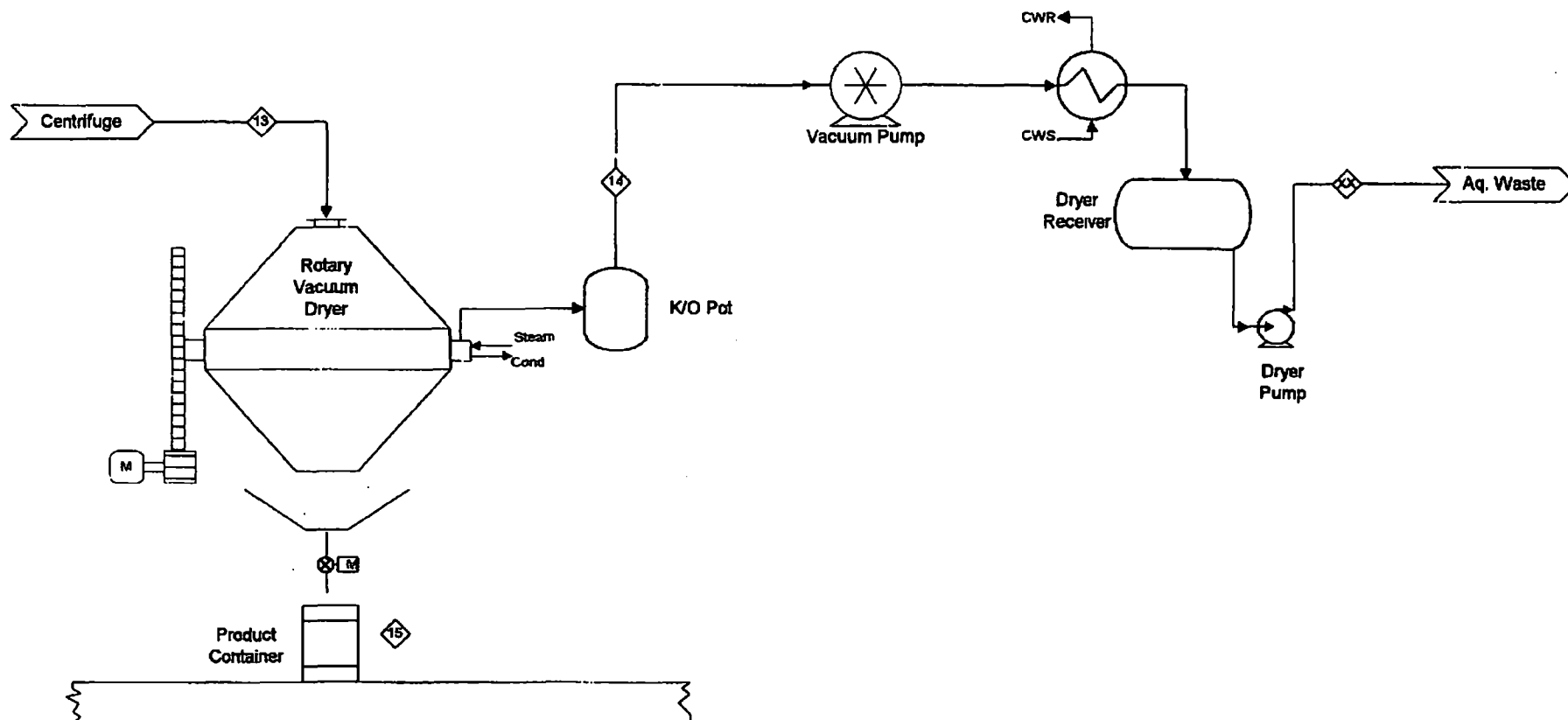
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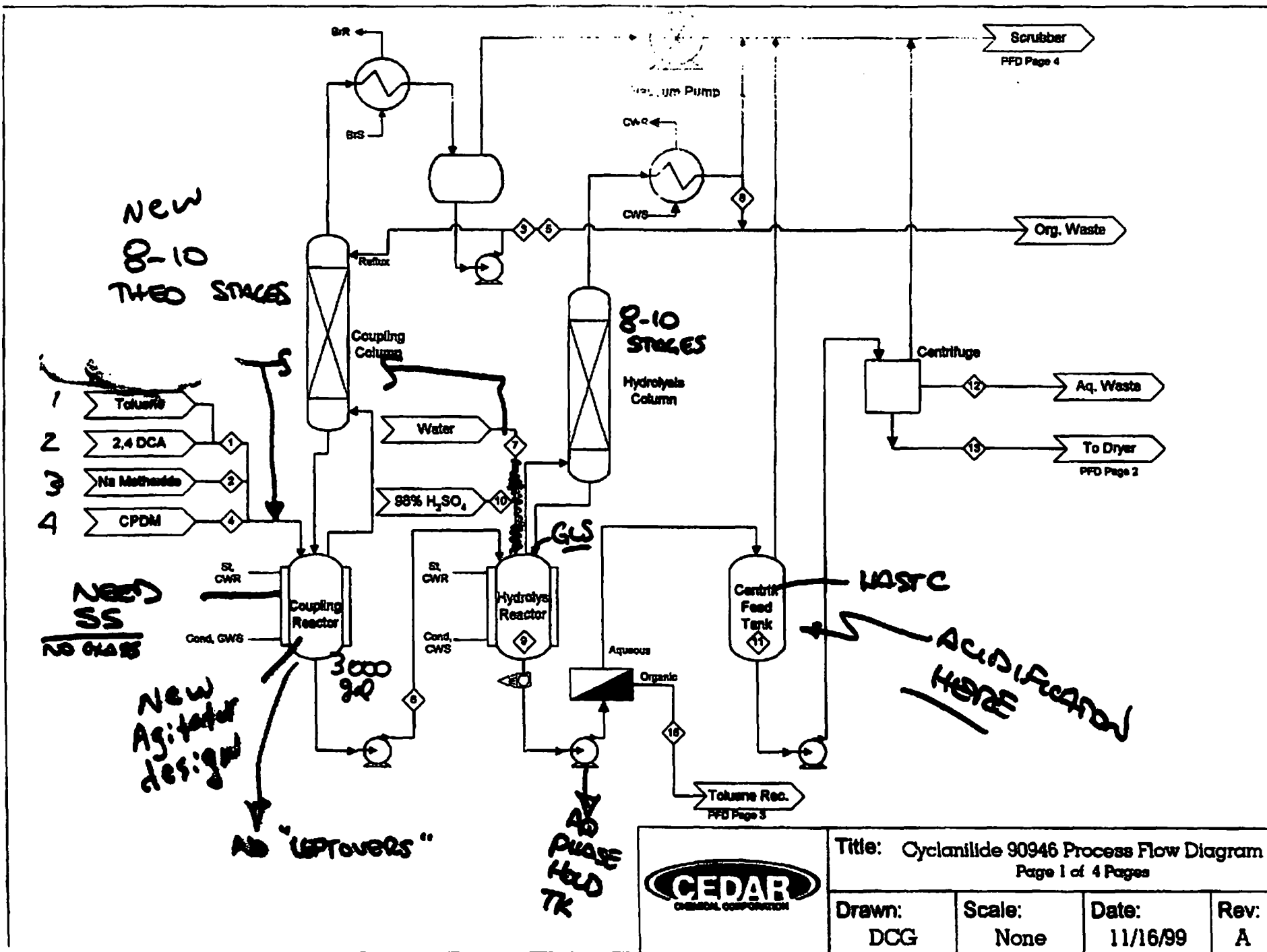


	Title: Cyclanilide 90946 Process Flow Diagram			
	Page 2 of 4 Pages			
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DCG	None	11/16/99	A	



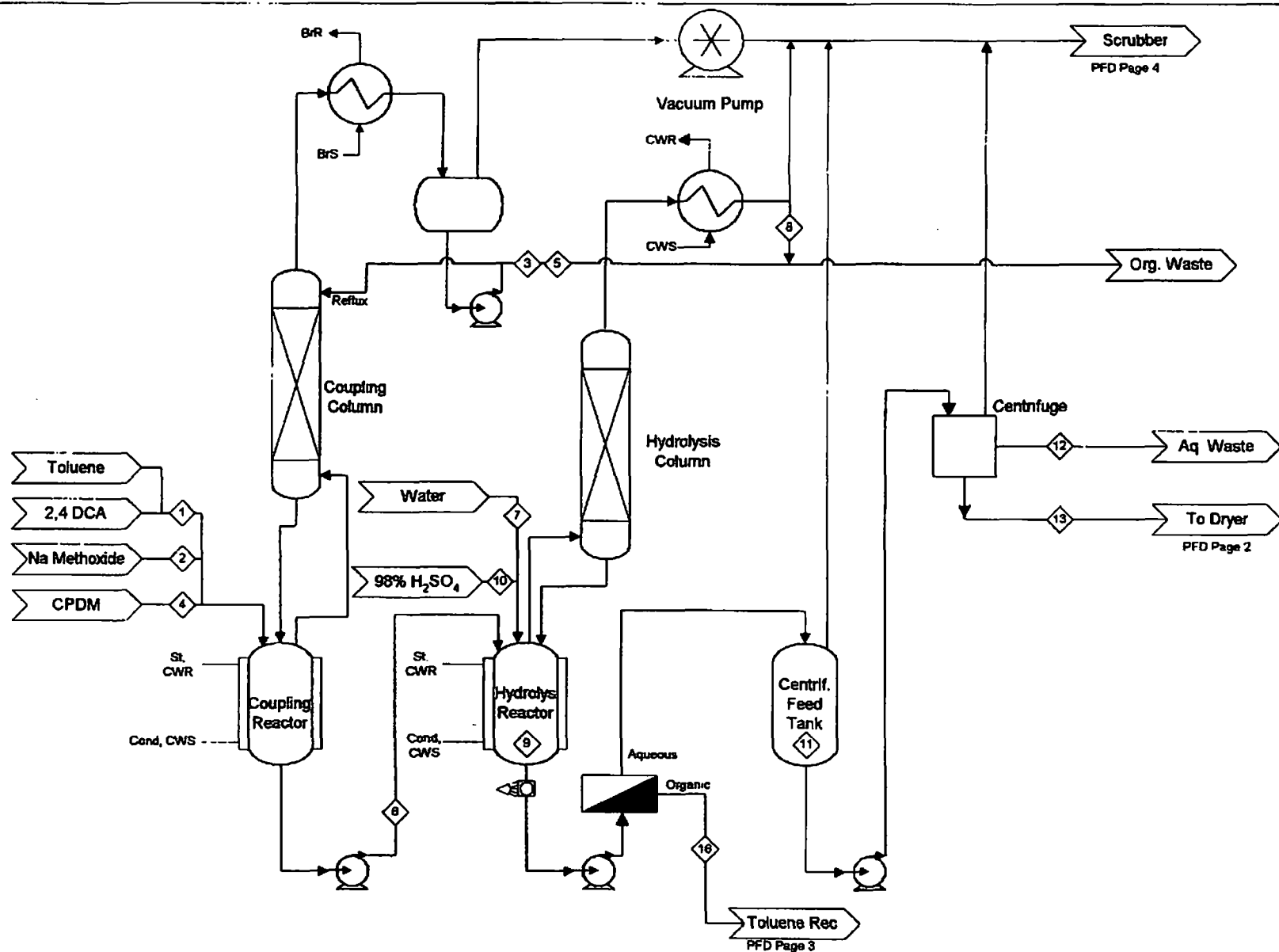
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Page 2 of 4 Pages

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Title: Cyclanilide 90946 Process Flow Diagram
Page 1 of 4 Pages

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Title: Cyclanilide 90946 Process Flow Diagram
Page 1 of 4 Pages

Drawn: DCG	Scale: None	Date: 11/16/99	Rev: A
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Rhone Poulenc RPA 90946 (Cyclanilide)

Heat & Mass Balance

R.P. Basis 0.53 gallons (2 L)
Cedar Basis 2,400.00 gallons (3,000 per train x 2 trains)

Assumptions:

1. Process overall 80% O.S.T. 6. ---
2. 0.5% Material Loss through centrifugation 7. ---
3. Centrifuge discharge @ 12% LOD 8. ---
4. Centrifugation Cycle=45 minutes @ 300 lb./plow 9. ---
5. Dryer discharge at 0.5% LOD 10. ---

Summary of Results

Final Product lb/bx: 1,864 lb
Limiting Cycle Time: 18.1 hours
Final Product lb/day: 2,471 lb/day

\$ 4.05 /lb to make \$10k/day

		COUPLING REACTION						HYDROLYSIS REACTION			ACIDIFICATION	
Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Initial Charge	Na Methylate Sol'n	Azeo Distillat'n	CPDM Charge	Rxn MeOH-Distillat'n	Coupling Product	Water Charge	Rxn MeOH-Distillat'n	Hydroly's Product	H ₂ SO ₄ Charge	Final Product Slurry
Component	MW											
Raw Materials												
CPDM	158.10				1,576.6							
2,4 DCA	162.00	1,632.7										
NaOCH ₃	54.00		592.9									
MeOH	32.00		1,778.7	1,778.7								
H ₂ O	18.00							10,554.7		10,554.7	19.0	10,552.7
NaOH	40.00							213.9				
H ₂ SO ₄	98.00										454.9	
Toluene	92.15	13,752.9		674.7			13,078.2			13,078.2		
(By) Products												
Na-CPMPA	310.10						3,030.6					
MeOH	32.00					638.2			312.7			
Na-RPA 90946	296.10									2,749.1		
RPA 90946	274.10											2,341.2
Na ₂ SO ₄	142.00										659.2	659.2
Others	---						60.6			137.5	187.3	
Stream Weight, lb/batch		15,385.6	2,371.5	2,453.3	1,576.6	638.2	16,169.4	10,768.6	312.7	26,519.4	1,320.4	13,553.1
Stream Volume, gal (ft³)		2,130.6	301.3	362.6	165.0	96.8	2,239.1	1,292.8	47.4	3,436.7	121.9	1,627.0
Temperature, °F		77.0	77.0	146.3	68.0	148.5	230.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia (torr)		14.7	14.7	(400)	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft³)		0.87	0.95	0.81	1.15	0.79	0.87	1.00	0.79	0.93	1.30	1.00
Viscosity, cP (cSt)												
Molar Yield (Overall)							98.0%			95.0%		92.0%

Rhone Poulenc RPA 90946 (C)
Heat & Mass Balance

R.P. Basis 0.53
 Cedar Basis 2,400.00

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 12% LOD
4. Centrifugation Cycle=45 minutes @ 300 lb./p
5. Dryer discharge at 0.5% LOD

		ISOLATION & DRYING				SOLVENT RECVRY		WASTE			
Stream No.		12	13	14	15	16	17	XX	XX		
Description		Mother Liquor Discharge	Wet Prod't to Dryer	Vent from Dryer	Dried Final Product	Toluene to Recycle	Recycled Toluene	Organic Waste	Aqueous Waste		
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH ₃	54.00										
MeOH	32.00										
H ₂ O	18.00	10,271.8	279.5	270.2	9.3	20.9		20.9	10,542.0		
NaOH	40.00										
H ₂ SO ₄	98.00										
Toluene	92.15					13,078.2	11,636.3	2,116.5			
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00							2,729.6			
Na-RPA 90946	296.10										
RPA 90946	274.10		2,329.5		1,863.6						
Na ₂ SO ₄	142.00	659.2							659.2		
Others	---					385.4		385.4			
Stream Weight, lb/batch		10,931.0	2,609.1	270.2	1,872.9	13,484.5	11,636.3	5,252.4	11,201.2		
Stream Volume, gal (ft ³)		1,312.2		40.5		1,867.8	1,611.8	764.2	1,280.6		
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0		
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7		
Density, g/cc (lb/ft ³)		1.00		0.80		0.87	0.87	0.83	1.05		
Viscosity, cP (cSt)											
Molar Yield (Overall)					(68.2%)						

Rhone Poulenc RPA 90946 (Cyclanilide)

Cycle Time Analysis

		Step Cycle Time	Vessel Cycle Time	Rate Limiting Time 18.1 hours
Coupling Reaction	Charge Toluene	<u>0.7</u> [Bulk]		
	Charge 2,4 DCA	<u>0.8</u> [Drum]		
	Charge Na Methoxide	<u>0.1</u> [Drum]		
	Distill MeOH/Toluene Azeotrope	3.0		
	Charge CPDM	<u>0.8</u>		
	Distill MeOH	2.0		
	Sample/Results	1.0	$\Sigma =$ 8.4	
Hydrolysis Reaction	Charge Water	<u>0.7</u> [Bulk]		
	Distill MeOH	3.0		
	Cool to 20°C	<u>1.6</u>		
	Decant Aq. Phase	1.0		
	Discharge Org. Phase	0.5		
	Sample/Results	1.0		
Acidification Reaction	Charge Sulfuric Acid	<u>2.9</u> [Tote]		
	Mix	0.5		
	Sample/Results	0.5		
	Transfer	0.5		
Centrifugation	Centrifuge Batch	<u>5.8</u>	$\Sigma =$ 18.1	
Drying	Charge Batch	1.0		
	Dry Batch	8.0		
	Packout	1.5	$\Sigma =$ 10.5	
Note: <u>nn.n</u> indicates calculated value, otherwise value is estimated			Total Batch Time Req'd	37.0 hours



facsimile transmittal

cc:
Jim Hottel
David Gussary

Please file

To: Allen Malone

Fax: 9-1-901-521-0789

From: Geoff Pratt

Date: 11/18/99

Re: Letter of Intent Cyclanilide

Pages: 5

Phone: 901-684-5373

Cc: R Tomblin

J. Mancini

C. McGee

☐ Urgent☐ For Review☐ Please Comment☐ Please Reply☐ Please Recycle

Dear Allen,

We have had extensive discussions with Rhone Poulenc regarding the toll manufacture of Cyclanilide aka (1-(2,4-dichlorophenylaminocarbonyl)-cyclopropane carboxylic acid) from 2,4-Dichloro aniline (2,4-DCA), and cyclopropane-1,1-dicarboxylic acid dimethyl ether (CPDM). The product is a crop protection chemical and as such is EPA registered.

We have begun preparations to manufacture the product in the Fall of 2000. We have confidential technology disclosures and have agreed to the economics.

Because the contract preparation and approval process at Rhone Poulenc is so ponderous they have asked for our help in formulating a letter of intent to keep the process moving and perhaps jump start the contract drafting procedures.

R-P will supply the 2,4-DCA, and CPDM. Sodium methoxide will be purchased by Cedar or R-P depending on who can get the best deal. The rest of the raw materials will be purchased by Cedar. Cedar will bill R-P for any raw material used at cost. The current estimated cost including sodium methoxide is \$3.56 / kg Product.

We will agree on target usage factors for 2,4-DCA and CPDM and adjust based on demonstrated usage after the first production campaign. After that we will be allowed a 3.5% plus or minus deviation. Excess usage beyond the range is to Cedar's account. Savings from lower usage beyond the range is to be shared equally.

Cedar Chemical Corporation

5100 Poplar Avenue, Ste 7514

Memphis, TN 38137

901-684-5371

Waste information is still pending and we will determine this cost to be passed through based on the data.

We have estimated a capital cost of \$750M which R-P would not pay unless they terminate the contract early. Amortization is over the three year contract and 500 Mtof product.

The contract should be evergreen after the three years with one year increments and one year notice. Volume commitments should be made on July 1 of each year.

The technology has been practiced by Huls (Creanova) in Europe and we will get data on their experience together with technical help from R-P.

R-P will supply 2,4-DCA and 70 MT of CPDM will come from Huls in the second, and fourth quarters of 2000. We will produce 80-100 MT Cyclanilide in the fourth quarter of 2000. We will produce 160MT in quarters 2,3 of 2001. This will depend on the supply of strategic raw materials from R-P.

Pricing for the processing only is \$8.00 /kg for the first run of 80-100 MT, \$7.00 for subsequent runs of 150-200 MT duration. \$6.50 for runs of greater than 200 MT.

Attached is a secrecy agreement which will give you data on the Company names etc. Will appreciate you drafting a LOI for us.

Geoff



file

facsimile transmission

To: Chris McGee Fax: 9-1-870-3795

From: Geoff Pratt Date: 11/18/99

Re: Cyclanilide Pages: 1

Phone: 901-684-5373 Cc: R Tomblin

D Guffey

J Rone

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

Dear Chris

R-P has asked that we keep December 15, and 16 open for the Cyclanilide meeting. They will confirm the exact date shortly.

They will send the secrecy agreement to arrive early next week. I have already approved a draft and therefore expect to sign and return an original the day that I receive it.

The tech package from Huls should arrive early in the following week.

One kilo samples of 2,4-DCA and CPDM will be air shipped tomorrow and drum quantities will follow by boat.

We agreed to have preliminary P&ID's at the meeting with Pierre, hopefully the Huls data will arrive in time and will contain something useful.

I am drafting a Letter of Intent as agreed at our October meeting with Serge and Hans.

Regards

Geoff

Cedar Chemical Corporation

Plow
F. 12



Internal Correspondence

To: Peter Fields
CC: C. McGee, J. Rone
From: David C. Guffey
Date: 22 November 1999
RE: Cyclanilide 90946 Project—Projected Waste Costs

Please be advised that we are currently investigating a new project for Rhone-Poulenc Agro, Cyclanilide 90946, with a projected startup of mid next year. Following are the preliminary worst-case waste figures based on a 15 hour cycle time with a 2,330 lb/batch payload:

Organic Waste:

<u>Component</u>	<u>Daily Prod'n</u> <u>(lb/day)</u>	<u>% of Stream</u>	<u>Est. Volume</u> <u>(gal/day)</u>
Water	41.9	0.4	5.0
Toluene	4,223.1	40.3	582.7
Methanol	5,459.2	52.0	829.6
Others (Heavies)	770.7	7.3	(Solid)

Aqueous Waste:

<u>Component</u>	<u>Daily Prod'n</u> <u>(lb/day)</u>	<u>% of Stream</u>	<u>Est. Volume</u> <u>(gal/day)</u>
Water	21,289.8	92.3	2555.8
Sodium Sulfate	1781.5	7.7	Disp. Solid

Please estimate waste costs on a daily basis for this project and disposal options.



Please File

Internal Correspondence

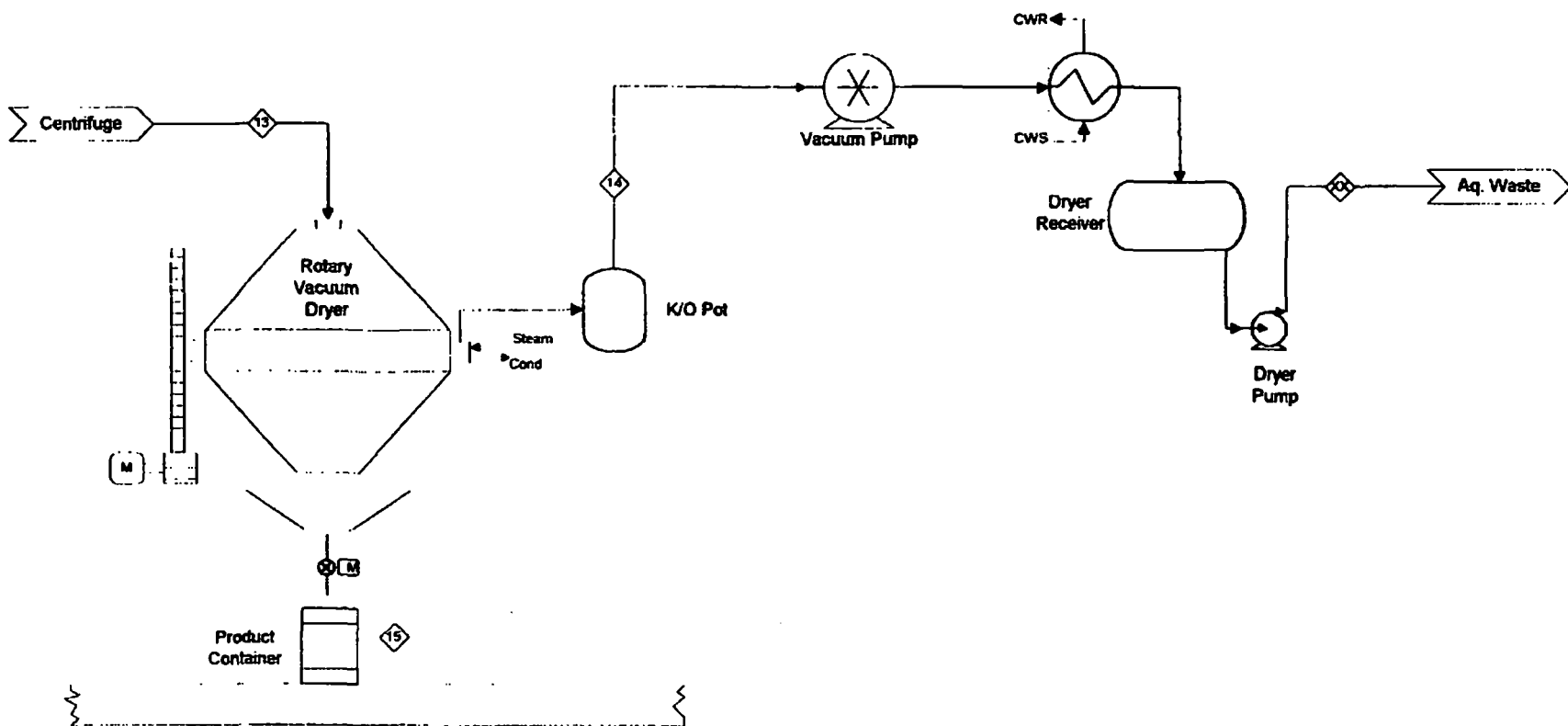
To: C. McGee, J. Rone
CC: file
From: David C. Guffey
Date: 18 November 1999
RE: PRELIMINARY Rhone Poulenc Cyclanilide 90946 PFD/Mass Balance

Attached is the preliminary PFD and Mass Balance for the subject project for your review. Please note the following revisions since the last publication of the PFD/MB:

1. Process to be run in Unit 1 instead of Unit 5
2. Coupling Reactor must be kept dry at all times requiring Hydrolysis and Acidification to be done in downstream vessels.
3. Toluene must be anhydrous—requires addition of a molecular sieve.
4. Earlier revisions of mass balance used 6.0 mol Water / mol of Na-CPMPA. Clean copy of RP data shows 60.0 mol Water / mol Na-CPMPA required. This means the Coupling Reactor batch must be shorted to make room for water charge in Hydrolysis Reactor. It may make sense to make full reactor batches of the Coupling Intermediate from two (2) reactors and have three (3) reactors in Hydrolysis/Acidification service—essentially making the Coupling Intermediate an isolated intermediate.
5. Cycle time calculation assumes Hydrolysis Reactor is also Centrifuge Feed Tank—I have to still work out the equipment details.
6. New vacuum dryer is shown as dryer for the process until details of the Nauta dryers is available.
7. Aqueous waste disposal is unknown at this time—since it is salt laden (~6% NaSO₄), I assume we will dispose outside of our water treatment system.
8. Toluene recovery is still a mystery. I have taken a “best guess” approach. I am assuming the MeOH/Toluene Azeotrope is a waste stream as is all the MeOH generated.



Rev:
A



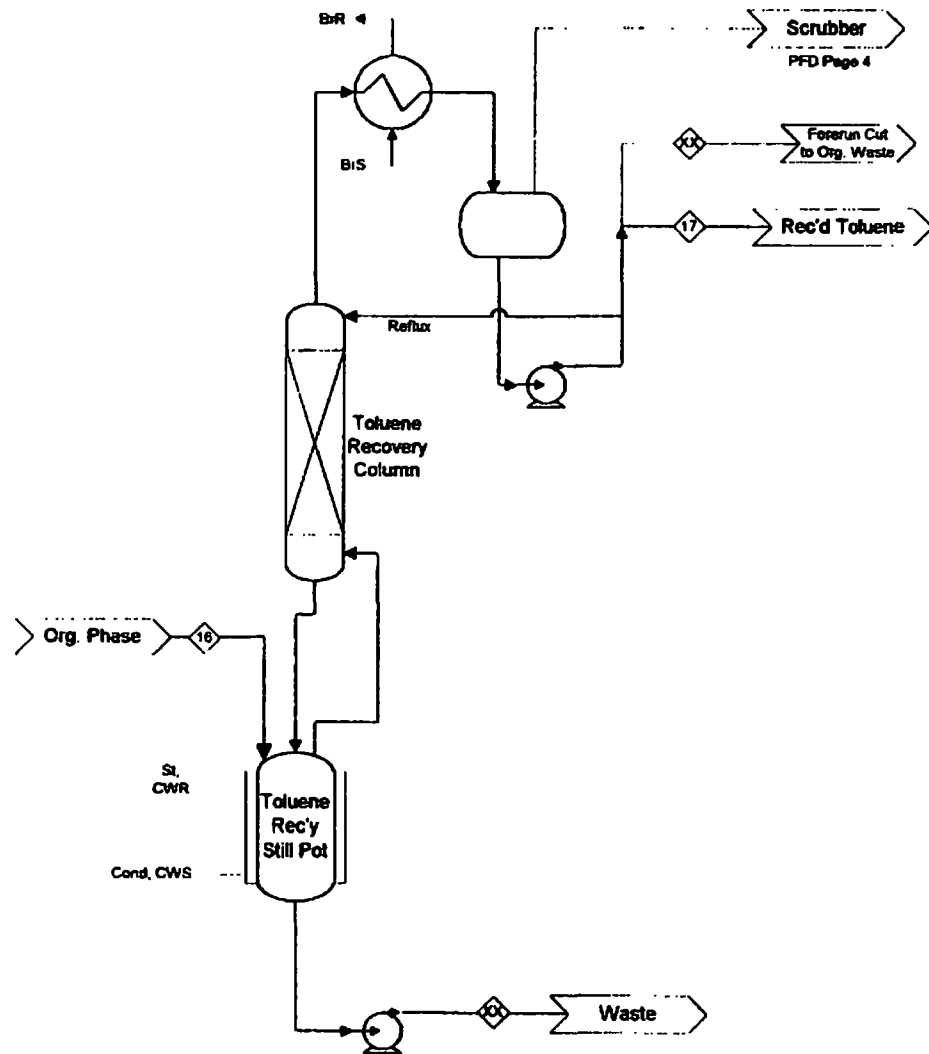
Title: Cyclanilide 90946 Process Flow Diagram
Page 2 of 4 Pages

Drawn:
DCG

Scale:
None

Date:
11/16/99

Rev:
A



Title: Cyclanilide 90946 Process Flow Diagram
Page 3 of 4 Pages

Drawn: DCG	Scale: None	Date: 11/16/99	Rev: A
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SECRECY AGREEMENT

This Agreement is made and entered as of the date last below written by and between:

Rhône-Poulenc Agro Matières Actives, a French "société en nom collectif" with a capital of 640 250 000 French Francs with its registered office at 14/20, rue Pierre Baizet - 69009 LYON - FRANCE, registered in Lyon under number B 399 135 532,

Represented by Mr Hans MOSER, Strategic Purchasing Director, Business Development,

Hereinafter referred to as "RPAMA",

as the first Party,

And

Cedar Chemical Corporation, a company duly organised under --- law with offices at 5100 POPLAR Avenue, MEMPHIS, TN 38137 USA,

Represented by Mr Geoffrey L. PRATT, Vice President

Hereinafter referred to as "CEDAR",

as the second Party,

Witnesseth:

- ◆ WHEREAS, RPAMA and CEDAR have entered into a certain Secrey Agreement dated as of May 14th, 1999 in relation to the exchange of technical and proprietary information of a confidential nature, including manufacturing and formulation know-how for the manufacture and formulation of Cyclanilide or CS-DCA;
- ◆ WHEREAS, pursuant to a certain Patent and Technical License Agreement dated July 12th, 1999 RPAMA has obtained the right from DEGUSSA-HÜLS to divulge certain valuable technical and proprietary information of a confidential nature of DEGUSSA-HÜLS origin relating to the production of CS-DCA (hereinafter referred to as "the DEGUSSA-HÜLS Confidential Information") to RPAMA's toll manufacturers provided such toll manufacturers agree to be bound by the confidentiality and non-use obligations under the Patent and Technical License Agreement;

- ◆ WHEREAS, RPAMA and CEDAR are interested in exchanging the DEGUSSA-HÜLS Confidential Information for the purpose of evaluating their interest to enter into a toll manufacturing or purchase agreement, or any similar agreement, of CS-DCA (hereinafter "the Purpose").

NOW, THEREFORE, in consideration of the premises and the terms and conditions herein contained the Parties have agreed as follows:

Clause 1. DEFINITIONS

"Affiliate(s)" means any entity that directly or indirectly, through one or more intermediaries, now or hereafter controls or is controlled by or is under common control with a Party hereto, except in countries where ownership of a majority or controlling interest by a foreign entity is not permitted by law, rule or regulations, the parent's direct or indirect voting interest may be less than a majority or controlling interest.

"Control" (including the terms "controls", "controlled by", "controlling" and "under common control with") are understood as meaning the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person or entity whether through the ownership of voting security, by contract or otherwise.

"CEDAR" means CEDAR and its Affiliates.

"DEGUSSA-HÜLS" means DEGUSSA-HÜLS and its Affiliates.

"RPAMA" means RPAMA and its Affiliates.

"Third Party" means any Party other than RPAMA, CEDAR, DEGUSSA-HÜLS and/or their Affiliates.

Clause 2. SECRECY

- 2.1. During the term of this Agreement, CEDAR agrees to hold in trust and confidence and not to disclose to any Third Party, nor to use for its own purposes other than the toll manufacture of CS-DCA for and on behalf of RPAMA any and all of the DEGUSSA-HÜLS Confidential Information disclosed to it by RPAMA under this Agreement.

- 2.2. CEDAR agrees to make available such DEGUSSA-HÜLS Confidential Information only to those of its employees who need to have access to it to carry out the toll manufacture of CS-DCA and shall cause such employees to be bound by the confidentiality and non-use obligations provided herein.
- 2.3. CEDAR shall be responsible for any breach of the confidentiality and non-use obligations provided herein by such employees, whether or not such employees continue to be employees of CEDAR.
- 2.4. CEDAR agrees to return promptly, free of charge, all of the DEGUSSA-HÜLS Confidential Information which is in written form to RPAMA at any time, upon RPAMA's request.
- 2.5. Any documents, drawings, electronic media and other material containing any part of the DEGUSSA-HÜLS Confidential Information shall be destroyed by shredding into pieces or returned to RPAMA upon expiration or termination of this Agreement.
- 2.6. CEDAR's obligations of non-disclosure does not apply to such information and document, which:
- at the time of the disclosure are generally available to the public; or
 - after disclosure become generally available to the public through no fault of CEDAR; or
 - CEDAR can prove to have been in its lawful possession at the time of disclosure by RPAMA.

Clause 3. LIMITATION OF RIGHT

Nothing herein contained shall be construed as granting to a Party any right, including any license, either express or implied, under any Confidential Information disclosed to a Party by another Party hereunder, except for a license to use the Confidential Information to conduct the evaluation as contemplated by the Agreement.

Clause 4. DURATION

This Agreement shall become effective as from the date of its last signature by the parties hereto. Unless terminated earlier or otherwise extended by mutual agreement in writing, this Agreement shall terminate one (1) year later, except for the confidentiality obligations set forth in Clause 2 which shall survive termination or expiration of this Agreement for a period of five (5) years following termination or expiration under article 6.1 of the Patent and Technical License Agreement dated July 12th, 1999 between RPAMA and DEGUSSA-HÜLS.

Clause 5. AMENDMENT

No amendment or consensual cancellation of this Agreement or any provisions or terms thereof and no extension of time or waiver or relaxation or suspension of any of the provisions or terms of this Agreement shall be binding unless recorded in a written document signed by the Parties. Any such extension, waiver or relaxation or suspension which is so given or made shall be strictly construed as relating to the matter in respect whereof it was made or given.

Clause 6. ENTIRETY

This Agreement contains the entire understanding between the Parties hereto regarding the subject matter hereof, and cancels and supersedes all previous agreements, representations and understandings, written or oral between the Parties hereto regarding the subject matter hereof.

Clause 7. ASSIGNMENT

The rights and obligations of this Agreement cannot be assigned to a Third Party by a Party without the prior written consent of the other Party.

Clause 8. APPLICABLE LAW

This Agreement shall be interpreted and construed in accordance with, and its performance shall be governed by French law.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed as of the day and year last below written.

Rhône-Poulenc Agro Matières Actives



Name: Hans MOSER

Title: Strategic Purchasing Director,

Business Development

Date: 13. 11. 99

Cedar Chemicals Corporation



Name: Geoffrey L. PRATT

Title: Vice President

Date: November 22, 1999

Rhône-Poulenc Agro

CEDAR Chemical Corporation
Mr Geoffrey L. PRATT
5100 Poplar Ave.
Suite 2414
Memphis, TN 38137
UNITED STATES

25 November 1999

Réf : fb/SR 191.99

SUBJECT : PROCESS TO PREPARE CYCLANILIDE

Dear Geoffrey,

Following the signature of the secrecy agreement which covers the technical information transmitted by Degussa-Hüls, you will find herewith their technical package describing the process to prepare Cyclanilide (their ref : Degussa-Hüls AG/FC-SI-ME/99-09-08 and the reply to RPA 30/09/99).

Please note that the process will be confirmed by Pierre Le Roy in our meeting in December in the U.S. As we have already discussed there are at least two main points of this package in contradiction with the merit note of RPA :

- replacement of sulfure acid by formic acid
- inversion of the reactant addition

That could significantly affects the overall yield of the reactions.

Best regards.


Serge RAVET
Toll manufacturing manager

Reply to the letter from Rhone-Poulenc-Agrevo dated 30.09.99

- Safety: No differential thermo analyses (DTAs) of the individual pure substances were carried out.

133-- 144°F

2,4-DCA melts at 59-62°C without any degradation or evolution of heat. Our experience regarding the storage of molten 2,4-DCA from the Tolochimie company shows that, at least in the first consignment, the proportion of chloride was around 80 mg/kg. This led to corrosion of the high-grade steel tank. However, this elevated chloride content was, at least to a great extent, already present in the raw material delivered.

In its pure form, **CDM** undergoes perceptible degradation at 120°C and higher, forming a high-viscosity polymer. No evolution of heat was observable.

124 - 379°F

CSDCA melts without degradation at 190-193°C.

- Stainless steel = DIN EN 10088: 1.4571 = AISI 316 Ti

Glass line = Pfaudler WWG

- A mass balance is described in item "3.3 Recipe"
The term "products" is possibly incomprehensible and should be replaced by "effluents".

Additional information regarding "3.2 Processing steps, process description"

Step 1 in R 1: duration 1h

Step 2 in R 2: duration 8h

Step 3 in R 3: duration 8h

Step 4 in R 4: duration 2.5h

Step 5 in R 5 and centrifuge: 8h

Step 6 in drier: 8h

Step 7 in R 6: 5h

Step 8 in R 7: 8h (This reactor perhaps has to be fitted with an additional evaporator.)

Process for preparing
1-(2,4-dichloroanilincarbonyl)
cyclopropanecarboxylic acid

(cyclanilide)

Degussa-Hüls AG
Werk Lülsdorf
Feldmühlestraße
D-53859 Niederkassel

Contents

Abbreviations

Administrative information

Chapter I: Raw materials

- 1.1 Physical data
- 1.2 Specifications
- 1.3 Impurities
- 1.4 Suppliers

Chapter II: Apparatus

- 2.1 Technical equipment
- 2.2 Flow sheet
- 2.3 Safety

Chapter III: Procedures

- 3.1 Chemical basis
- 3.2 Processing steps, process description
- 3.3 Recipe

Chapter IV: Products

- 4.1 Physical data
- 4.2 Specifications
- 4.3 Impurities
- 4.4 Analytical methods

Chapter V: Patents

- Patent

Abbreviations

Cyclanilide / CS-DCA	1-(2,4-dichloroanilino-carbonyl) cyclopropane-carboxylic acid
R	reactor
T	tank
NM	sodium methoxide
CDM	dimethyl cyclopropane-1,1-dicarboxylate
RM	reaction mixture

Administrative information

Degussa-Hüls AG
Weißfrauenstr. 9
D-60287 Frankfurt

Degussa-Hüls AG
Werk Lülsdorf
Feldmühlestraße 1
D-53859 Niederkassel

Chapter I: Raw materials

1.1 Physical data:

Compound	Formula	Molar mass	m.p. [°C]	b.p. [°C]	Density ²⁰ [g/cm ³]	Flash point [°C]
NM 30	NaOCH ₃	54.10	< 6	92	0.9700	32
CDM	(CH ₂) ₂ C(CO ₂ CH ₃) ₂	158.10	n.d.	85/10 mbar 50/2 mbar	1.150 ²⁰	95
2,4-Dichloroaniline	Cl ₂ C ₆ H ₃ NH ₂	162.02	59-62	245 111-112 ³⁵	-	-
Toluene	C ₆ H ₅ CH ₃	92.14	- 92	110.6	0.865	4
Water	H ₂ O	18	0	100	1.000	-
Formic acid	HCOOH	46.03	8.4	100.8	1.18	68
NaOH 20%	NaOH	40.0	n.d.	about 100	1.22	-

1.2 + 1.3 Specifications/impurities:

CDM:	Appearance:	colourless to slightly yellow
	Purity:	≥ 97.5%
	DMM	≤ 1.0%
	DMF	≤ 0.75%
	Residue	≤ 0.75%

2,4-Dichloroaniline:	Appearance:	yellow to dark-violet crystalline material without lumps
	Purity:	≥ 99.0%
	Water	≤ 0.1%
	Melting point:	≥ 60°C
	2,5-DCA	≤ 0.3%
	2,6-DCA	≤ 0.4%
	3,4-DCA	≤ 0.3%
	4-Chloroaniline	≤ 0.1%
	Chloride	≤ 20 ppm
	Residue	≤ 0.2%

Sodium methoxide 30%	Appearance: Total alkali: NaOMe eff.:	colourless liquid 29.5 – 31.0% 29.0 – 30.5%
Toluene	Appearance: Content: Water	colourless clear liquid ≥ 99.8% ≤ 200 ppm
NaOH 20 %	Appearance: Content:	clear colourless slightly viscous liquid 19.5 – 20.5%
Water	Appearance: Hardness: pH: COD: AOX:	clear colourless liquid < 1 6 – 7.5 < 30 ppm < 20 ppm
Formic acid	Appearance: Content: Colour index:	clear colourless liquid 84 – 86% < 10

1.4 Suppliers

Raw materials are identified by the supplier's documents. In the case of external suppliers, certificates of analysis of each batch are requested. Furthermore, each delivery is subjected to a raw material testing. In the case of internal suppliers, an analysis of the batch is requested. This analysis is carried out in the quality control laboratory.

Chapter II: Apparatus

2.1 Technical equipment

Degussa-Hüls

0.7 m³ Stainless-steel reactor

Heating:
Stirrer:
Solids metering funnel

R 1

135 gal

6 bar steam - 87 psi (Δ or G?)
anchor stirrer

2.0 m³ Stainless-steel reactor

Heating:
Stirrer:
Column:

R 2

528 gal

? 6 bar steam
MIG stirrer
mounted on the reactor, approximately 20
theoretical plates

4.0 m³ Stainless-steel reactor

Heating/cooling:
Stirrer:
Column:

R 3

1057 gal

? 6 bar steam/water
MIG stirrer
mounted on the reactor, approximately 20
theoretical plates

5.0 m³ glass-lined reactor

Heating/cooling:
Stirrer:
pH measurement:

R 4

1321 gal

6 bar steam/water
blade stirrer
probe in the submerged tube of the reactor

1.3 m³ glass-lined reactor

Stirrer:

R 5

343 gal

impeller stirrer

Heine centrifuge

Type:
Volume:
Speed:

vertical perforated basket centrifuge
160 l
0 - 1000 rpm

1.6 m³ centr. receiver

T 3 423 gal

pH measurement:

probe in the circulation line

1 m³ shuffle drier

264 gal

Heating/cooling:

6 bar steam/water

Stirrer:

blade stirrer

0.7 m³ Stainless-steel reactor

R 6 185 gal

Heating/cooling:

6 bar steam/water

Stirrer:

MIG stirrer

Column:

mounted on the reactor, approximately 10 theoretical plates, removal of water by phase separation

0.7 m³ Stainless-steel reactor

R 7 185 gal

Heating/cooling:

6 bar steam/water

Stirrer:

anchor stirrer

Column:

mounted on the reactor, approximately 10 theoretical plates

4 m³ Stainless-steel reactor

T 8 1057 gal

Stirrer:

anchor stirrer

pH measurement:

probe in the circulation line of the reactor

4 m³ Stainless-steel tank

T 4 1057 gal

4 m³ Stainless-steel tank

T 2

4 m³ Stainless-steel tank

T 6

15 m³ Stainless-steel tank

T 1 3963 gal

15 m³ Stainless-steel tank

T 7

Heating:	electric
15 m ³ Stainless-steel tank	T 5 <u>3963 gal</u>
Activated charcoal filter	one-layer pressure filter
Volume:	800 l <u>211 gal</u>
Pressure:	6 bar maximum
Sieve	separator (gyratory riddle)
Mesh size	0.5 mm

Degussa-Hüls

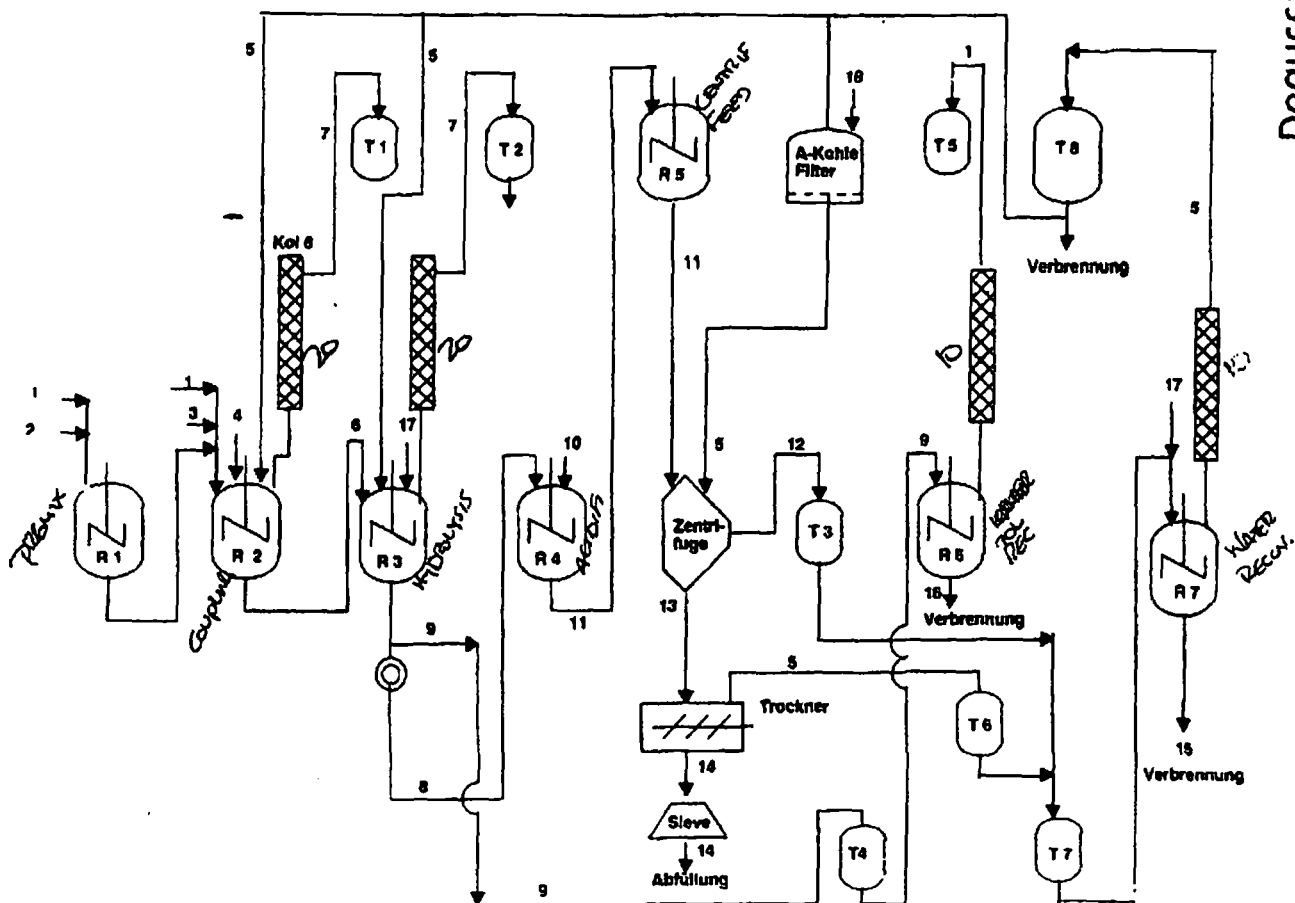
Description of the plant

The plant used for producing cyclanilide is located at the Lülisdorf site, Feldmühlstraße, D-53859 Niederkassel. The organizational code of the Lülisdorf pilot plant is: GB FC WL P 3.

The Lülisdorf pilot plant is designed and suitable for process development and the production of, inter alia, intermediates for agrochemicals. The raw materials required for producing cyclanilide may be used in the Lülisdorf pilot plant, since the appropriate official authorization has been granted.

The Lülisdorf pilot plant is equipped with 0.7 – 5 m³ V4A and glass-lined reactors, with stainless-steel columns, with centrifuges and 1 m³ driers for carrying out the operations.

2.2 Flow sheet



Degussa-Hüls

1 Toluol
2 2,4-DCA
3 CDM
4 NM

5 H₂O
6 Reaktionsgemisch
7 MeOH/Toluol
8 Na-CS-DCA/H₂O

9 Toluol /HS
10 Ameisensäure
11 CSDCA/H₂O/NaOCHO
12 H₂O/NaOCHO

13 CSDCA feucht
14 CSDCA
15 NaOCHO

16 HS
17 20 % NaOH
18 A-Kohle

T = Tank
R = Reaktor

1 Toluene	5 H ₂ O	9 Toluene/residue	13 cyclanilide moist	16 HB	T = Tank R = Reactor
2 2,4-DCA	6 Reaction mixture	10 Formic acid	14 cyclanilide	17 20% NaOH	
3 CDM	7 MeOH/toluene	11 cyclanilide/H ₂ O/ NaOCHO	15 NaOCHO	18 Activated carbon	
4 NM	8 Na- cyclanilide/H ₂ O	12 H ₂ O/NaOCHO			

2.3 Safety:

During the metered addition of NM, the reaction mixture in R 2 passes through a phase of high viscosity. Towards the end of the reaction, the viscosity decreases again.

2,4-Dichloroaniline: Toxic, environmentally hazardous (German Regulation on Hazardous Substances)

Extreme care with respect to work safety is required when working with 2,4-DCA, since the material is classified as being toxic and environmentally hazardous. Efficient exhausting devices are required. Before leaving the plant, all process water has to be examined for 2,4-DCA.

Sodium methoxide 30%: Toxic, corrosive (German Regulation on Hazardous Substances)

Sodium methoxide solution must not come into contact with water, since the sodium hydroxide formed cleaves CDM.

Toluene: Highly flammable (German Regulation on Hazardous Substances)

See specifications for water in Chapter 1

NaOH 20% Corrosive (German Regulation on Hazardous Substances)

Formic acid Corrosive (German Regulation on Hazardous Substances)

The handling of formic acid requires considerable care. Contact between the skin and formic acid results, within a very short period of time, in severe cauterization which heals only very slowly.

Chapter III: Procedures

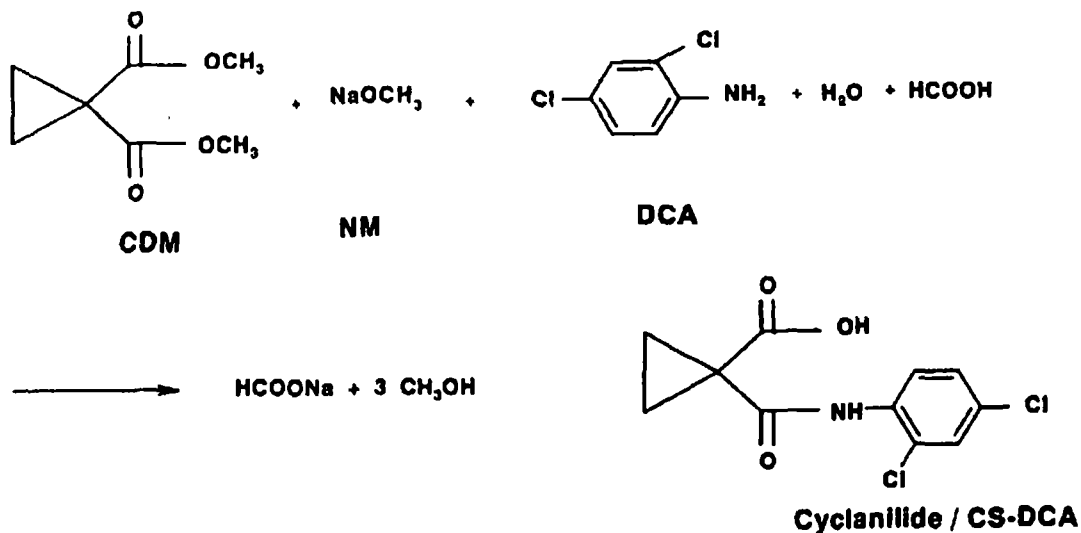
3.1 Chemical basis

Cyclanilide

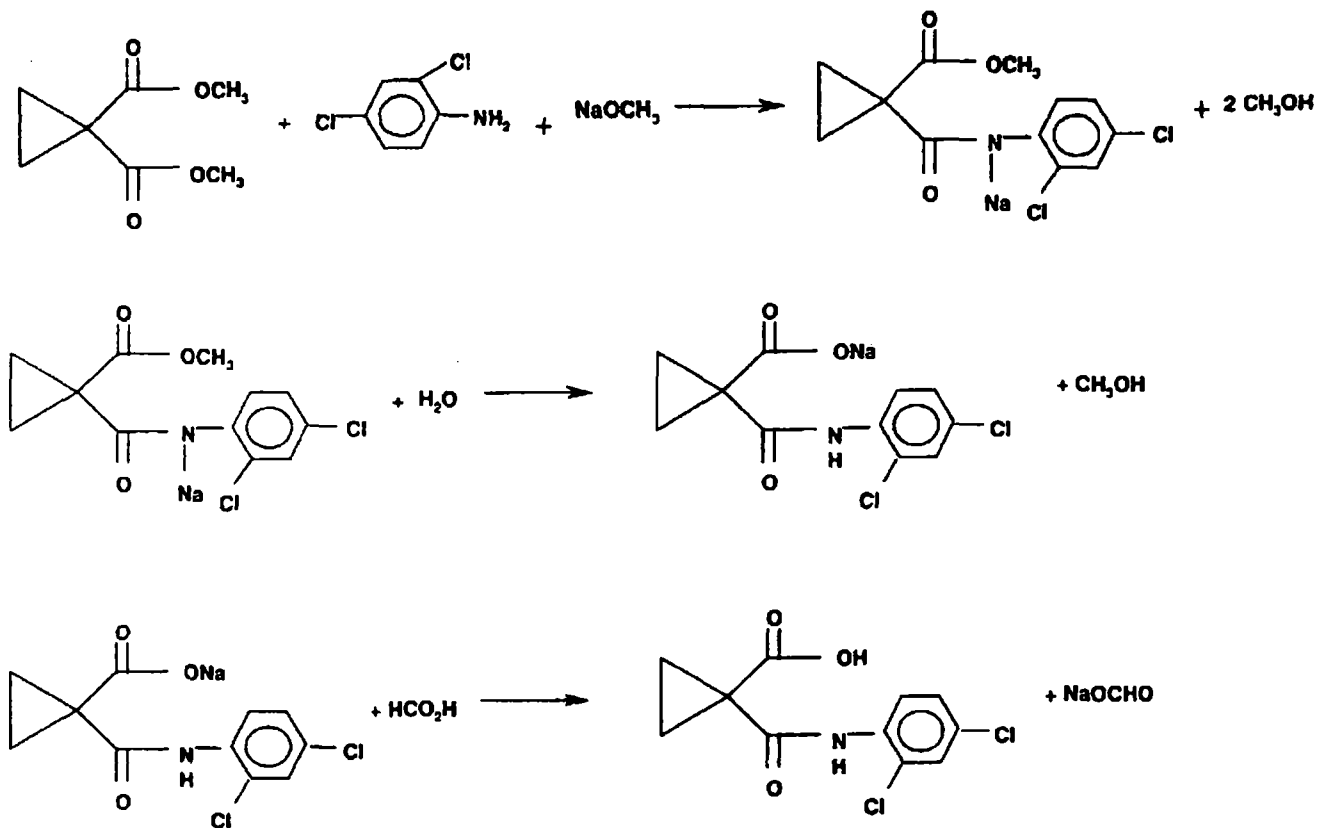
Chemical formula:	$C_{11}H_9Cl_2NO_3$
Molecular weight:	274.1 g/mol
Chemical name:	1-(2,4-dichloroanilinocarbonyl)cyclopropane-1-carboxylic acid
Alternative chemical name:	1-[[[(2,4-dichlorophenyl)amino]carbonyl]cyclopropane-carboxylic acid
CAS number:	113136-77-9

After addition of stoichiometric amounts of NM, CDM reacts on one carboxyl group with 2,4-dichloroaniline to give the amide. The other ester group is, after addition of water, hydrolysed and the target product is precipitated out using formic acid, filtered and dried.

Overall equation:



Single steps:



3.2 Processing steps, process description

Step 1 in R 1:

Material	Amount
Toluene	300 kg
2,4-Dichloroaniline	200 kg

R 1 is charged with 300 kg of toluene. 200 kg of 2,4-DCA are then added into R 1. The mixture is stirred at 35-40°C for 20-30 min. The solution is then ready for use.

Step 2 in R 2:

Material	Amount
Toluene/ 2,4-DCA from R 1	500 kg
Toluene	700 - 750 kg
CDM (100%)	200 kg
NM 30	252 kg
Water	500 - 550 kg

R 2 is charged with the toluene/DCA solution, the toluene and the CDM.

The pressure is then reduced to 350-360 hPa and the bottom is heated to 56-59°C.

The NM 30 is then metered in at a steady rate over 2-2.5 h.

During the metered addition of NM, an MeOH/toluene azeotrope is taken off at the top of the column.

After the end of the metered addition of NM, distillation is continued until the bottom temperature has reached 76°C.

The bottom is then cooled to 60-65°C. Water is added to R 2. The mixture is stirred for 15-20 min.

The batch is subsequently transferred to R 3.

NaOCH_3 1.400 mol
 CDM 1.265 mol
 $2,4\text{-DCA}$ 1.235 mol
 H_2O 29.167 mol

$\text{NaOCH}_3 : \text{CDM} = 1.107$
 $\text{NaOCH}_3 : 2,4\text{DCA} = 1.134$
 $\text{NaOCH}_3 : \text{H}_2\text{O} = 0.049$
 $\text{CDM} : 2,4\text{DCA} = 1.024$
 $\text{H}_2\text{O} : 2,4\text{DCA} = 23.617$

Step 3 in R 3:

Material	Amount
RM from R 2	about 1750 kg
Water	450 - 500 kg

R 3 is filled with the reaction mixture from R 2.

The water is charged into R 3.

R 3 is heated at reflux under atmospheric pressure for 3 h.

When the temperature at the top falls below 70°C, the low boilers are distilled off at the top.

During this operation, the temperature at the top is kept below 70°C.

The RM is then cooled to < 50°C.

pH of the lower phase: > 11.5. If this is not the case, the pH is adjusted using a little NaOH and the hydrolysis is repeated.

A phase separation is carried out. The lower phase is transferred to R 4. The upper phase is transferred to R 6.

Step 4 in R 4:

Material	Amount
Lower phase from R 3	about 1300 kg
Formic acid	about 100 kg

The lower phase of the RM from R 3 is transferred to R 4.

R 4 is cooled to < 25°C, and this temperature is maintained during the precipitation.

Formic acid is charged into R 4 over a period of 1-2 h. The pH is adjusted to 3.8-3.9, and cyclanilide precipitates out of the aqueous RM.

Step 5 in R 5 and centrifuge:

Material	Amount
RM from R 4	1400 kg
Water	about 600 kg

The suspension from R 4 is transferred to R 5 and filtered using the centrifuge. The filtercake on the centrifuge is washed with water.

The filtercake is centrifuged and scraped off.

Step 6 in drier:

Material	Amount
Moist filtercake from the centrifuge	about 350 kg

The moist filtercake from the centrifuge is charged into the drier.

The cyclanilide is dried at 90-95°C and < 50 hPa for 4 h.

Step 7 in R 6:

Material	Amount
Upper phase from R 3	about 930 kg

The upper phase from R 3 is charged into R 6 and the toluene is distilled off. The distillate can be recycled into the reaction. The residue is disposed off by incineration.

Step 8 in R 7:

Material	Amount
Filtrate from centrifuge	about 1200 kg
Wash filtrate from the centrifuge	about 650 kg
NaOH 20 %	about 100 kg

Filtrate, wash filtrate from the centrifuge and NaOH 20 % are charged into R 7. Water is distilled off until solid residue remains. This is disposed off by incineration.

In-process control

1. The amount of distillate (azeotrope MeOH/toluene) obtained during the reaction in R 2 has to be > 400 kg.
2. pH of the lower phase after the hydrolysis in R 3: > 11.5
3. 2,4-DCA concentration in the outflow of the activated carbon filter < 30 ppm
4. Melting point of the filtercake on the centrifuge: > 189°C
5. Amount of moist solid on the centrifuge: > 330 kg

3.3 Recipe

	Raw materials	[kmol]	[kg]	[l]
1	Toluene	-	1040	(1200 l)
2	DCA	1.2342	200	
3	CDM (100%)	1.265 (+ 2.5 %)	200	(174 l)
4	NM 30 (75.6 kg 100 %)	1.397 (+ 13.2 %)	252	(260 l)
5	H ₂ O	-	about 1000	(1000)
10	Formic acid (85 %)	1.94	about 105	(about 89 l)
5	Wash H ₂ O (3 centr., in each case 3 x 60-80 ltr.)		about 650	(about 650 l)
17	NaOH (20 %)	0.5	about 100	(about 90 l)
		Sum:	about 3547	
	Products			
16	Toluene bottoms for incineration (from R 6)		about 32	
14	Cyclanilide (86 % yield) (100% yield 338.3 kg)	1.08	290	
1	Toluene distillate		about 920	
7	Azeotrope toluene/MeOH		about 440	
5	H ₂ O distillate		about 1710	
15	Na formate (from R 7)		about 155	
		Sum:	about 3547	

Naturally, the batch sizes laid down in this description are adapted to the equipment in the plant. Batch sizes can be modified as long as the ratios are maintained. Which amounts can be varied and to what extent is described under the individual processing steps. These data are based on experience gained in the plant. There are no experiences or research results on more substantial changes. Accordingly, it cannot be guaranteed that such changes would be successful.

Environmental statement:

All steps carried out in the Lülsdorf pilot plant in connection with the process for preparing cyclanilide are in accordance with current legislation.

Chapter V: Patents

Patent:

DE 4114733	„Verfahren zur Herstellung von substituierten Malonesteraniliden und Malonsäure-monoaniliden“
EP 0512211	„Verfahren zur Herstellung von substituierten Malonesteraniliden und Malonsäure-monoaniliden“
US 5334747	„Method of preparing substituted malonic-acid-anilides and malonic-acid-monoanilides“

Degussa-Hüls

Rhone Poulenc RPA 90946 (Cyclanilide)--DeGussa-Huls Technology Basis
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./plow
5. Dryer discharge at 0.5% LOD
6. All Yield calculations based on DCA
7. ---
8. ---
9. ---
10. ---

Summary of Results

Final Product lb/bx: 1,759 lb
 Limiting Cycle Time: 12.7 hours
 Final Product lb/day: 3,331 lb/day
 Final Product MT/day: 1.5 MT/day
 Prod'n w/two Trains: 2.6 MT/day

Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Premix Initial Charge	Coupling Rxtr Charge + Premix	MeOH-Tol Azeo Strip	O/H Charged Back	Intermed Xferred to Hydrol Rxtr	Hydrol Rxtr Water Charge	Hydrol Intermediate	MeOH Distillat'n	AQ Phase to Acidific'n	ORG Phase to Rec'y	Acidific'n Rxtr Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		1,499.1									
2,4 DCA	162.00	1,499.1	1,499.1									
NaOCH ₃	54.00		566.7									
MeOH	32.00		1,322.2									
H ₂ O	18.00						7,495.7	7,495.7		7,495.7		
NaOH	40.00							151.9				
Formic Acid	46.03			104.9	104.9				120.9		780.0	749.6
Toluene	92.15	2,248.7	7,683.1	756.3	756.3	7,683.1		7,683.1	874.4		6,811.7	
(By) Products												
Na-CPMPA	310.10					2,940.4						
MeOH	32.00			1,993.9	1,993.9	1,993.9		2,297.3	2,297.3			
Na-RPA 90946	296.10							2,807.7		2,807.7		
RPA 90946	274.10											
NaCHO ₂	68.01											
Others											329.7	
Stream Weight, lb/batch		3,747.9	12,570.3	2,750.2	2,750.2	12,617.4	7,495.7	20,435.7	3,168.7	10,303.4	7,141.5	749.6
Stream Volume, gal {ft³}		519.0	1,596.9	406.5	406.5	1,755.8	899.8	2,529.1	468.4	1,275.2	986.6	76.3
Temperature, °F		100.0	136.0	146.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia {torr}		14.7	14.7	{270}	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc {lb/ft³}		0.87	0.95	0.81	0.81	0.86	1.00	0.97	0.81	0.97	0.87	1.18
Viscosity, cP {cSt}												
Molar Yield {Overall}												

72.5
27.5

Rhone-Poulenc RPA 90946 (Cycl.)
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./p
5. Dryer discharge at 0.5% LOD

0.724
 ΔQ / 0.736 kg/kg Toluene (1/2)

Stream No.		12	13	14	15	16	17	18	19	20	21
Description		Precipit'd Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Toluene to Recycle	Recycled Toluene	Water to Recycle	Recycled Water	Organic Waste	Aqueous Waste
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH ₃	54.00										
MeOH	32.00										
H ₂ O	18.00	7,495.7	7,779.8	662.8	11.0	10.9		8,442.5	3247.1 6,974.5	10.9	195.4 1,468.0
NaOH	40.00										
Formic Acid	46.03					7804.0 6,844.7	6384.3 5,386.8				
Toluene	92.15									1,415.7	
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00									2,297.3	
Na-RPA 90946	296.10										
RPA 90946	274.10	2,209.2		2,198.2	1,758.5						
NaCHO ₂	68.01	1,107.5	1,107.5					1,107.5			1,107.5
Others	—					329.7				329.7	1302.9
Stream Weight, lb/batch		10,812.4	8,887.2	2,860.9	1,769.5	7,462.3	6,306.0	9,550.0	6,974.5	4,053.7	2,575.5
Stream Volume, gal (ft³)		1,338.2	987.9			990.7	747.4	1,061.5	837.3	592.9	268.9
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0	68.0	68.0
Pressure, psia (torr)		14.7	14.7	14.7	(38)	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft³)		0.97	1.08			0.87	0.87	1.08	1.00	0.82	1.15
Viscosity, cP (cSt)											
Molar Yield (Overall)		85%									

Rhone Poulenc RPA 90946 (Cyclanilide)—DeGussa-Huls Technology Basis
Cycle Time Analysis

		<u>Step Cycle</u> <u>Time</u>	<u>Vessel Cycle</u> <u>Time</u>
Premix Prep (R-1)	Charge Toluene Charge 2,4 DCA Mix/Hold	0.2 [Bulk] 0.8 [Drum] 0.5	$\Sigma = 1.5$
Coupling Reaction (R-2)	Charge Toluene Charge Premix Draw Vacuum Heat to 56-59°C Charge Na Methoxide Distill MeOH/Toluene Azeotrope Cool to 60-65°C Transfer O/H Back Transfer to Hydrolysis Rxtr	0.5 [Bulk] 0.3 0.5 0.8 3.0 [Tote] 3.0 2.0 0.3 1.0	$\Sigma = 10.8$
Hydrolysis Reaction (R-3)	Charge Tempered Water Heat/Reflux Distill MeOH Cool Rxtr <50°C Sample/NaOH Adjust Phase Separate / Transfer	1.2 [Pipeline] 2.5 2.5 2.0 2.5 2.0	$\Sigma = 12.7$
Acidification (R-4)	Cool <25°C Charge Formic Acid Mix Sample/Results Transfer	2.0 3.0 [Drum] 0.5 0.5 1.5	$\Sigma = 7.5$
Centrifugation (R-5)	Centrifuge 2 Batches	8.3	$\Sigma = 8.3$
Drying	Charge 1.5 batches Dry Batch Packout	1.5 4.0 2.5	$\Sigma = 8.0$

Rate Limiting Time 12.7 hours

NOTES:

nn.n indicates calculated value,
otherwise value is estimated

Total Batch Time Req'd 48.8 hours

8.3 + 1.5 = 9.8

Rhone Poulenc RPA 90946 (Cyclanilide)-DeGussa-Huls Technology Basis Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./plow
5. Dryer discharge at 0.5% LOD

6. All Yield calculations based on DCA

7. ---
8. ---
9. ---
10. ---

Summary of Results

Final Product lb/bx: 6.4 lb-mol
Limiting Cycle Time: 12.7 hours
Final Product lb/day: 12.2 lb-mol/day

Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Premix Initial Charge	Coupling Rxt Charge + Premix	MeOH-Tol Azeo Strip	O/H Charged Back	Intermed Xferred to Hydrol Rxt	Hydrol Rxt Water Charge	Hydrol Intermediat e	MeOH Distillat'n	AQ Phase to Acidific'n	ORG Phase to Rec'y	Acidific'n Rxt Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		9.482									
2,4 DCA	162.00	9.254	9.254									
NaOCH ₃	54.00		10.494									
MeOH	32.00		41.320									
H ₂ O	18.00						416.429	416.429		416.429		
NaOH	40.00							3.798				
H ₂ SO ₄	98.00											7.649
Toluene	92.15	24.403	83.376	8.207	8.207	83.376		83.376	9.456		73.920	
(By) Products												
Na-CPMPA	310.10					9.482						
MeOH	32.00			62.308	62.308	62.308		71.790	71.790			
Na-RPA 90946	296.10							9.482		9.482		
RPA 90946	274.10											
Na ₂ SO ₄	142.00											
Others	300.00										1.099	
Stream Weight, lb/batch		33.7	153.9	70.5	70.5	155.2	416.4	584.9	81.2	425.9	75.0	7.6
Stream Volume, gal {ft ³ }												
Temperature, °F		100.00	136.00	146.30	145.00	145.00	140.00	77.00	212.00	68.00	77.00	77.00
Pressure, psia {torr}		14.70	14.70	270.00	14.70	14.70	14.70	14.70	14.70	14.70	14.70	14.70
Density, g/cc {lb/ft ³ }		0.87	0.95	0.81	0.81	0.86	1.00	0.97	0.81	0.97	0.87	1.18
Viscosity, cP (CSt)												
Molar Yield {Overall}												

Rhone Poulenc RPA 90946 (C)
-Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./p
5. Dryer discharge at 0.5% LOD

Stream No.		12	13	14	15	16	17	XX	XX		
Description		Precipit'd Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Toluene to Recycle	Recycled Toluene	Organic Waste	Aqueous Waste		
Component	MW										
Raw Materials											
CPDM	158.10									#REF!	#REF!
2,4 DCA	162.00									#REF!	#REF!
NaOCH ₃	54.00									#REF!	#REF!
MeOH	32.00									#REF!	#REF!
H ₂ O	18.00	416.429	432.209	36.820	0.611	0.605		0.605	81.557	#REF!	#REF!
NaOH	40.00									#REF!	#REF!
H ₂ SO ₄	98.00									#REF!	#REF!
Toluene	92.15					73.920	58.556	15.363		#REF!	#REF!
By Products											
Na-CPMPA	310.10									#REF!	#REF!
MeOH	32.00							71.790		#REF!	#REF!
Na-RPA 90946	296.10									#REF!	#REF!
RPA 90946	274.10	8.060		8.020	6.416					#REF!	#REF!
Na ₂ SO ₄	142.00	7.799	7.799						7.799	#REF!	#REF!
Others	300.00					1.099		1.099		#REF!	#REF!
Stream Weight, lb/batch		432.3	440.0	44.8	7.0	75.6	58.6	88.9	89.4		
Stream Volume, gal (ft³)											
Temperature, °F		68.00	68.00	212.00	212.00	68.00	75.00	68.00	68.00	#REF!	#REF!
Pressure, psia (torr)		14.70	14.70	14.70	37.50	14.70	14.70	14.70	14.70	#REF!	#REF!
Density, g/cc (lb/ft³)		0.97	1.08			0.87	0.87	0.82	1.15	#REF!	#REF!
Viscosity, cP (cSt)										#REF!	#REF!
Molar Yield (Overall)										#REF!	#REF!

Rhone Poulenc RPA 90946 (Cyclanilide)--DeGussa-Huls Technology
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Matenal Loss through centrifugation
3. Centrfuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./plow
5. Dryer discharge at 0.5% LOD
6. All Yield calculations based on DCA
7. ---
8. ---
9. ---
10. ---

Summary of Results

Final Product lb/bx:	1,759 lb
Limiting Cycle Time:	12.7 hours
Final Product lb/day:	3,331 lb/day
Final Product MT/day:	1.5 MT/day
Prod'n w/two Trains:	2.6 MT/day

Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Premix Initial Charge	Coupling Rxtr Charge + Premix	MeOH-Tol Azeo Strip	O/H Charged Back	Intermed Xferred to Hydrol Rxtr	Hydrol Rxtr Water Charge	Hydrol Intermedia te	MeOH Distillat'n	AQ Phase to Acidific'n	ORG Phase to Rec'y	Acidific'n Rxtr Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		1,499.1									
2,4 DCA	162.00	1,499.1	1,499.1									
NaOCH3	54.00		566.7									
MeOH	32.00		1,322.2									
H2O	18.00						7,495.7	7,495.7		7,495.7		
NaOH	40.00							151.9				
Formic Acid	46.03											749.6
Toluene	92.15	2,248.7	7,683.1	756.3	756.3	7,683.1		7,683.1	871.4		6,811.7	
(By) Products												
Na-CPMPA	310.10					2,940.4						
MeOH	32.00			1,993.9	1,993.9	1,993.9		2,297.3	2,297.3			
Na-RPA 90946	296.10							2,807.7		2,807.7		
RPA 90946	274.10											
NaCHO2	68.01											
Others	---										329.7	
Stream Weight, lb/batch		3,747.9	12,570.3	2,750.2	2,750.2	12,617.4	7,495.7	20,435.7	3,168.7	10,303.4	7,141.5	749.6
Stream Volume, gal {ft3}		519.0	1,596.9	406.5	406.5	1,755.8	899.8	2,529.1	468.4	1,275.2	986.6	76.3
Temperature, °F		100.0	136.0	146.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia {torr}		14.7	14.7	{270}	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc {lb/ft3}		0.87	0.95	0.81	0.81	0.86	1.00	0.97	0.81	0.97	0.87	1.18
Viscosity, cP {cSt}												
Molar Yield {Overall}												

Rhone Poulenc RPA 90946 (Cycl.
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./p
5. Dryer discharge at 0.5% LOD

		CF	Dryer	Packout	Solvent Recovery	Water Recovery		Waste Streams			
Stream No.		12	13	14	15	16	17	18	19	20	21
Description		Precipit'd Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Toluene to Recycle	Recycled Toluene	Water to Recycle	Recycled Water	Organic Waste	Aqueous Waste
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH3	54.00										
MeOH	32.00										
H2O	18.00	7,495.7	7,779.8	662.8	11.0	10.9		8,442.5	6,974.5	10.9	1,468.0
NaOH	40.00										
Formic Acid	46.03										
Toluene	92.15					6,811.7	5,396.0			1,415.7	
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00									2,297.3	
Na-RPA 90946	296.10										
RPA 90946	274.10	2,209.2		2,198.2	1,758.5						
NaCHO2	68.01	1,107.5	1,107.5					1,107.5			1,107.5
Others	---					329.7				329.7	
Stream Weight, lb/batch		10,812.4	8,887.2	2,860.9	1,769.5	7,152.3	5,396.0	9,550.0	6,974.5	4,053.7	2,575.5
Stream Volume, gal {ft3}		1,338.2	987.9			990.7	747.4	1,061.5	837.3	592.9	268.9
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0	68.0	68.0
Pressure, psia {torr}		14.7	14.7	14.7	{38}	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc {lb/ft3}		0.97	1.08			0.87	0.87	1.08	1.00	0.82	1.15
Viscosity, cP {CSt}											
Molar Yield {Overall}		85%									

Rhone Poulenc RPA 90946 (Cyclanilide)—DeGussa-Huls Technology Basis
Cycle Time Analysis

		<u>Step Cycle Time</u>	<u>Vessel Cycle Time</u>
Premix Prep (R-1)	Charge Toluene	<u>0.2</u> [Bulk]	
	Charge 2,4 DCA	<u>0.8</u> [Drum]	
	Mix/Hold	0.5	$\Sigma = 1.5$
Coupling Reaction (R-2)	Charge Toluene	<u>0.5</u> [Bulk]	
	Charge Premix	<u>0.3</u>	
	Draw Vacuum	0.5	
	Heat to 56-59°C	0.8	
	Charge Na Methoxide	3.0 [Tote]	
	Distill MeOH/Toluene Azeotrope	3.0	
	Cool to 60-65°C	2.0	
	Transfer O/H Back	<u>0.3</u>	
	Transfer to Hydrolysis Rxtr	1.0	$\Sigma = 10.8$
Hydrolysis Reaction (R-3)	Charge Tempered Water	<u>1.2</u> [Pipeline]	
	Heat/Reflux	2.5 3.0	
	Distill MeOH	2.5	
	Cool Rxtr <50°C	2.0	
	Sample/NaOH Adjust	2.5	
	Phase Separate / Transfer	2.0	$\Sigma = 12.7$
Acidification (R-4)	Cool <25°C	2.0	
	Charge Formic Acid	3.0 [Drum]	
	Mix	0.5	
	Sample/Results	0.5	
	Transfer	1.5	$\Sigma = 7.5$
Centrifugation (R-5)	Centrifuge 2 Batches	<u>8.3</u>	$\Sigma = 8.3$
Drying	Charge 1 5 batches	1.5	
	Dry Batch	4.0	
	Packout	2.5	$\Sigma = 8.0$

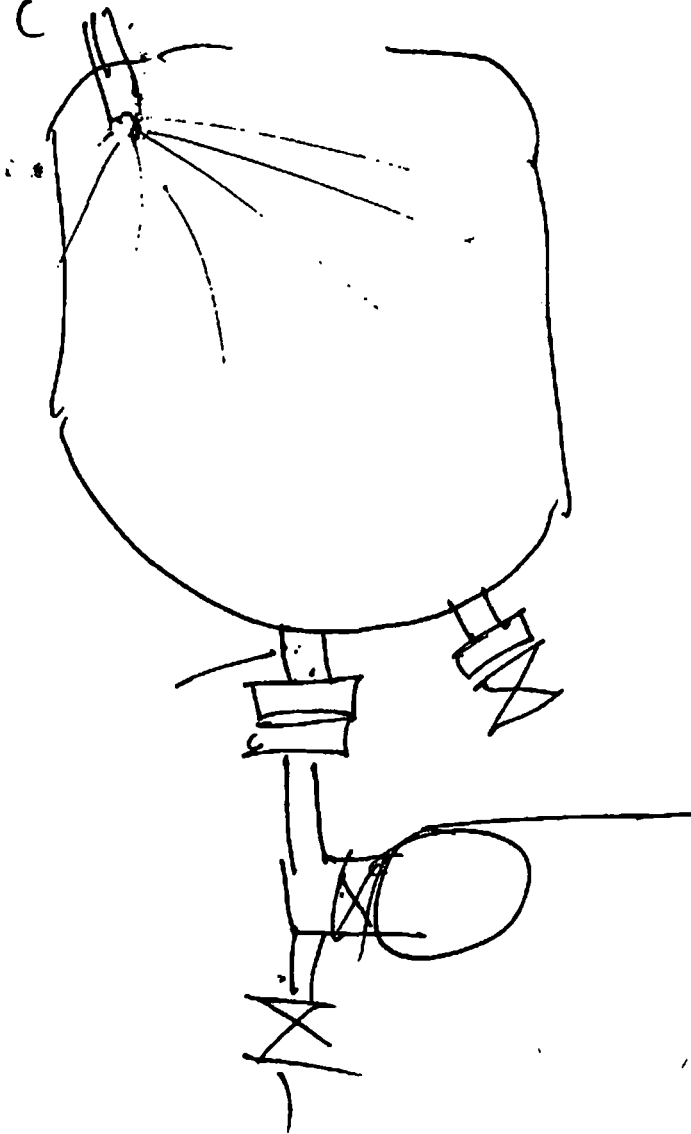
Rate Limiting Time 12.7 hours
--

NOTES:

nn.n indicates calculated value,
otherwise value is estimated

Total Batch 48.8 hours
Time Req'd

McChato C





49 Phillips Road 311 • Helena, AR 72342 • (870) 572-3701 • Fax (870) 572-3795

To:	Serge Ravet	Date:	2/17/00
Location:	Aventis—Lyon, France	Copy to:	Joe Mancini
From:	D.C. Guffey		Chris McGee
Location:	Helena, Arkansas		Kevin Payne
Extension:	283		Geoff Pratt
Subject:	Cyclanilide 90946 Technical Questions		
Reference:			

Following are questions relating to the Cyclanilide 90946 Process in the Cedar Chemical Helena Facility.

I. Raw Materials, Waste Streams, and Products

A. Toluene

1. Purchasing responsibility—Cedar or R.P.?
2. (Preferred) Vendor?
3. Raw material specification (especially maximum water content)?
4. Shipping method?
5. Shipping container connection style, size?
6. Normal shipping weight/
7. Provide vendor material safety data sheet?

B. CPDM

1. Purchasing responsibility—Cedar or R.P.?
2. (Preferred) Vendor?
3. Raw material specification?
4. Shipping method?
5. Shipping container connection style, size?
6. Normal shipping weight/
7. Provide vendor material safety data sheet?
8. Physical properties of material
 - a. Viscosity curve temperature curve
 - b. Vapor Pressure vs. temperature curve
 - c. Density vs. temperature curve

C. Coupling Intermediate

1. Physical Properties
 - a. Viscosity vs. temperature curve
 - b. Vapor Pressure vs. temperature curve
 - c. Density vs. temperature curve

2. Analysis methods?
3. Analytical targets?
4. Acceptable materials of construction (Glass lined steel? 316 Stainless Steel?—
Especially in regards to distillation column, column packing, pumps, heat exchangers)

D. Hydrolysis Intermediate

1. Physical Properties
 - a. Viscosity curve temperature curve (if different from water)
 - b. Vapor Pressure vs. temperature curve (if different from water)
 - c. Density vs. temperature curve
2. Analysis methods?
3. Analytical targets?
4. Acceptable materials of construction (Glass lined steel? 316 Stainless Steel?—
Especially in regards to distillation column, column packing, pumps, heat exchangers)

E. Acidification Intermediate

1. Physical Properties
 - a. Viscosity vs. temperature curve
 - b. Vapor Pressure vs. temperature curve
 - c. Density vs. temperature curve
2. Analysis methods?
3. Analytical targets?
4. Particle size distribution data?
5. Acceptable materials of construction (Glass lined steel? 316 Stainless Steel?—
Especially in regards to distillation column, column packing, pumps, heat exchangers,
and centrifuge [Hast C])

F. Centrifuge Wet Cake

1. Bulk density of the wet solids at 10, 25, and 50 %Volatile.
2. Typical %Volatile of centrifuged solids?
3. Specific heat of centrifuged solids?
4. Particle size distribution?

G. Dried Final Product

1. Bulk density of dry solids?
2. Melting point curve solids—does the M.P. change as the %Volatiles changes?
3. Specific heat of dry solids?

H. MeOH/Toluene Azeotrope

1. Is azeotrope broken (ternary azeotrope) in toluene recovery to maximize toluene recovery?
2. If so, what solvent is used to break azeotrope?
3. Is toluene water washed to remove MeOH and maximize %toluene recovered?
4. Is the toluene dried in some manner? (i.e. molecular sieve)
5. Specification for Recovered toluene?
6. Analysis and targets required for toluene re-use?

I. Organic Waste

1. What is the typical composition of the Organic Waste stream leaving the process after recovery (Degussa package: toluene 33%, high boilers 67%)
2. What is typical amount of organic waste for Sulfuric Acid process (Degussa package: 0.279 kg bottoms / 1 kg bone dry product)?

J. Aqueous Waste

1. What is the typical composition of the Aqueous Waste stream leaving the process after recovery for Sulfuric Acid process (Degussa package 85% NaOCHO, 15% H₂O)?
2. What is typical amount of aqueous waste for Sulfuric Acid process (Degussa package: 0.540 kg bottoms / 1 kg bone dry product)?
3. In what phase is Aqueous Waste handled (i.e. liquid, solid, slurry)? Sodium Formate solubility in water 43%.
4. In the "In-Process Control" section of the Degussa package, item 3 states that "2,4 DCA concentration in the outflow of the activated carbon filter <30 ppm." What is the concentration of 2,4 DCA in the supply stream to this filter?
5. Is a distillation column required in the water recovery step or could a simple strip (flash distillation—2 total stages or a simple spray column contactor—3 total stages) accomplish the desired separation?

II. Process Steps

A. Coupling

1. Can mixed Xylenes be used instead of Toluene for solvent—No azeotrope? Cedar lab work shows Xylene used with Dugussa process is promising. Xylene does not appear to work with R.P. process due to higher temperatures required for strip.
2. Can additional toluene be added to coupling batch following distillation for viscosity control? Cedar lab work shows addition of neat solvent to batch does little to "clean" reactor walls. Addition of the MeOH/toluene overheads BACK to the reactor causes the material to go from slurry to dark-amber solution—easier to transfer, less problems with leftover material in the reactor for next batch.
3. Distillation done under vacuum or at atmospheric pressure conditions? If done under atmospheric conditions, separation can potentially be made in a smaller column.
4. If done under vacuum: is vacuum controlled and at what pressure?

B. Hydrolysis

1. Does the phase split generate a rag layer? Cedar lab work shows rag layer for toluene—no rag for Xylene.
2. If rag layer is generated, does it go with aqueous or organic phases?
3. What is impact of Methanol left in the reactor?

C. Acidification

1. What acid (Sulfuric or Formic) is to be used for the process? Cedar lab work shows Formic processes better.
2. Cedar lab work also shows propionic acid works for acidification step.
3. What is maximum pH for step?
4. After precipitation, can the pH be adjusted back to 4 to 5?

K. Centrifugation

1. Material of construction of the centrifuge filter cloth?
2. Mesh or Micron rating of the centrifuge cloth?
3. Is the mesh size an absolute or a qualitative rating?

L. Drying

1. Cedar lab work shows low temperature and no vacuum required for drying. What is Degussa experience?
2. Dust explosion classification? (ST- rating)

M. Pack-out

1. Material packed out in polypropylene lined drums (RP Merit Note). Are these polypropylene lined steel, fiber, or plastic drums?
2. What is the required net weight of the package?
3. What is the tolerance required on the weight of the package?

N. Toluene Recovery

1. Operating Conditions?
 - a. Total number of stages?
 - b. Overall column height?
 - c. Column diameter?
 - d. Material of construction?
 - e. Type internals?
 - f. Boilup rate? ΔP at rate?
 - g. Reflux ratio?
 - h. Take-off rate?
 - i. Column top temperature?
 - j. Reboiler temperature?

O. Water Recovery (Salt Concentration)

- a. Total number of stages?
- b. Overall column height?
- c. Column diameter?
- d. Material of construction?
- e. Type internals?
- f. Boilup rate? ΔP at rate?
- g. Reflux ratio?
- h. Take-off rate?
- i. Column top temperature?
- j. Reboiler temperature?

III. Effects of Variables

For each process step, delineate key process variables and describe the impact of deviation-high and deviation-low. For example

COUPLING

Variable	Target	Effect of Deviation HIGH	Effect of Deviation LOW
Toluene Charge	5.20 kg/kg 2,4 DCA	Increased Toluene Recovery Loading	Thick batch—processing problems
DCA Charge	Etc.	Etc.	Etc.
Final Strip Temperature	Etc.	Etc.	Etc.

Rhône-Poulenc Agro

Copy to D. Guffey
Jim Rowe

Then File

CEDAR Chemical Corporation
Mr Geoffrey L. PRATT
5100 Poplar Ave.
Suite 2414
Memphis, TN 38137
UNITED STATES

25 November 1999

Réf : fb/SR 191.99

SUBJECT : PROCESS TO PREPARE CYCLANILIDE

Dear Geoffrey,

Following the signature of the secrecy agreement which covers the technical information transmitted by Degussa-Hüls, you will find herewith their technical package describing the process to prepare Cyclanilide (their ref : Degussa-Hüls AG/FC-SI-ME/99-09-08 and the reply to RPA 30/09/99).

Please note that the process will be confirmed by Pierre Le Roy in our meeting in December in the U.S. As we have already discussed there are at least two main points of this package in contradiction with the merit note of RPA :

- replacement of sulfure acid by formic acid
- inversion of the reactant addition

That could significantly affects the overall yield of the reactions.

Best regards.


Serge RAVET

Toll manufacturing manager

- **Safety: No differential thermo analyses (DTAs) of the individual pure substances were carried out.**

2,4-DCA melts at 59-62°C without any degradation or evolution of heat. Our experience regarding the storage of molten 2,4-DCA from the Tolochimie company shows that, at least in the first consignment, the proportion of chloride was around 80 mg/kg. This led to corrosion of the high-grade steel tank. However, this elevated chloride content was, at least to a great extent, already present in the raw material delivered.

In its pure form, CDM undergoes perceptible degradation at 120°C and higher, forming a high-viscosity polymer. No evolution of heat was observable.

CSDCA melts without degradation at 190-193°C.

- **Stainless steel = DIN EN 10088: 1.4571 = AISI 316 TI**

Glass line = Pfaudler WWG

- **A mass balance is described in item "3.3 Recipe"**
The term "products" is possibly incomprehensible and should be replaced by "effluents".

Additional information regarding "3.2 Processing steps, process description"

Step 1 in R 1: duration 1h

Step 2 in R 2: duration 8h

Step 3 in R 3: duration 8h

Step 4 in R 4: duration 2.5h

Step 5 in R 5 and centrifuge: 8h

Step 6 in drier: 8h

Step 7 in R 6: 5h

Step 8 in R 7: 8h (This reactor perhaps has to be fitted with an additional evaporator.)

Process for preparing
1-(2,4-dichloroanilincarbonyl)
cyclopropanecarboxylic acid

(cyclanilide)

Degussa-Hüls AG
Werk Lüssdorf
Feldmühlestraße
D-53859 Niederkassel

Contents

Abbreviations

Administrative information

Chapter I: Raw materials

- 1.1 Physical data
- 1.2 Specifications
- 1.3 Impurities
- 1.4 Suppliers

Chapter II: Apparatus

- 2.1 Technical equipment
- 2.2 Flow sheet
- 2.3 Safety

Chapter III: Procedures

- 3.1 Chemical basis
- 3.2 Processing steps, process description
- 3.3 Recipe

Chapter IV: Products

- 4.1 Physical data
- 4.2 Specifications
- 4.3 Impurities
- 4.4 Analytical methods

Chapter V: Patents

- Patent

Abbreviations

Cyclanilide / CS-DCA	1-(2,4-dichloroanilino-carbonyl) cyclopropane-carboxylic acid
R	reactor
T	tank
NM	sodium methoxide
CDM	dimethyl cyclopropane-1,1-dicarboxylate
RM	reaction mixture

Administrative information

Degussa-Hüls AG
Weißfrauenstr. 9
D-60287 Frankfurt

Degussa-Hüls AG
Werk Lülsdorf
Feldmühlestraße 1
D-53859 Niederkassel

Deaussa-Hüls

Compound	Formula	Molar mass	m.p. [°C]	b.p. [°C]	Density [g/cm ³] ²⁹	Flash point [°C]
NM 30	NaOCH ₃	54.10	< 6	92	0.9700	32
CDM	(CH ₂) ₂ C(CO ₂ CH ₃) ₂	158.10	n.d.	85/10 mbar 50/2 mbar	1.150 ²⁹	95
2,4-Dichloroaniline	Cl ₂ C ₆ H ₃ NH ₂	162.02	59-62	245 111-112 ³⁵	-	-
Toluene	C ₆ H ₅ CH ₃	92.14	- 92	110.6	0.865	4
Water	H ₂ O	18	0	100	1.000	-
Formic acid	HCOOH	46.03	8.4	100.8	1.18	68
NaOH 20%	NaOH	40.0	n.d.	about 100	1.22	-

CDM:	Appearance:	colourless to slightly yellow
	Purity:	≥ 97.5%
	DMM	≤ 1.0%
	DMF	≤ 0.75%
	Residue	≤ 0.75%
2,4-Dichloroaniline:	Appearance:	yellow to dark-violet crystalline material without lumps
	Purity:	≥ 99.0%
	Water	≤ 0.1%
	Melting point:	≥ 60°C
	2,5-DCA	≤ 0.3%
	2,6-DCA	≤ 0.4%
	3,4-DCA	≤ 0.3%
	4-Chloroaniline	≤ 0.1%
	Chloride	≤ 20 ppm
	Residue	≤ 0.2%

Sodium methoxide 30%	Appearance: Total alkali: NaOMe eff.:	colourless liquid 29.5 – 31.0% 29.0 – 30.5%
Toluene	Appearance: Content: Water	colourless clear liquid ≥ 99.8% ≤ 200 ppm
NaOH 20 %	Appearance: Content:	clear colourless slightly viscous liquid 19.5 – 20.5%
Water	Appearance: Hardness: pH: COD: AOX:	clear colourless liquid < 1 6 – 7.5 < 30 ppm < 20 ppm
Formic acid	Appearance: Content: Colour index:	clear colourless liquid 84 – 86% < 10

1.4 Suppliers

Raw materials are identified by the supplier's documents. In the case of external suppliers, certificates of analysis of each batch are requested. Furthermore, each delivery is subjected to a raw material testing. In the case of internal suppliers, an analysis of the batch is requested. This analysis is carried out in the quality control laboratory.

Chapter II: Apparatus

2.1 Technical equipment

0.7 m³ Stainless-steel reactor

R 1

Heating:
Stirrer:
Solids metering funnel

6 bar steam
anchor stirrer

2.0 m³ Stainless-steel reactor

R 2

Heating:
Stirrer:
Column:

6 bar steam
MIG stirrer
mounted on the reactor, approximately 20
theoretical plates

4.0 m³ Stainless-steel reactor

R 3

Heating/cooling:
Stirrer:
Column:

6 bar steam/water
MIG stirrer
mounted on the reactor, approximately 20
theoretical plates

5.0 m³ glass-lined reactor

R 4

Heating/cooling:
Stirrer:
pH measurement:

6 bar steam/water
blade stirrer
probe in the submerged tube of the reactor

1.3 m³ glass-lined reactor

R 5

Stirrer:

impeller stirrer

Heine centrifuge

Type:
Volume:
Speed:

vertical perforated basket centrifuge
160 l
0 – 1000 rpm

1.6 m³ centr. receiver

T 3

pH measurement:

probe in the circulation line

1 m³ shuffle drier

Heating/cooling:

6 bar steam/water

Stirrer:

blade stirrer

0.7 m³ Stainless-steel reactor

R 6

Heating/cooling:

6 bar steam/water

Stirrer:

MIG stirrer

Column:

mounted on the reactor, approximately 10 theoretical plates, removal of water by phase separation

0.7 m³ Stainless-steel reactor

R 7

Heating/cooling:

6 bar steam/water

Stirrer:

anchor stirrer

Column:

mounted on the reactor, approximately 10 theoretical plates

4 m³ Stainless-steel reactor

T 8

Stirrer:

anchor stirrer

pH measurement:

probe in the circulation line of the reactor

4 m³ Stainless-steel tank

T 4

4 m³ Stainless-steel tank

T 2

4 m³ Stainless-steel tank

T 6

15 m³ Stainless-steel tank

T 1

15 m³ Stainless-steel tank

T 7

Heating:	electric
15 m ³ Stainless-steel tank	T 5
Activated charcoal filter	one-layer pressure filter
Volume:	800 l
Pressure:	6 bar maximum
Sieve	separator (gyratory riddle)
Mesh size	0.5 mm

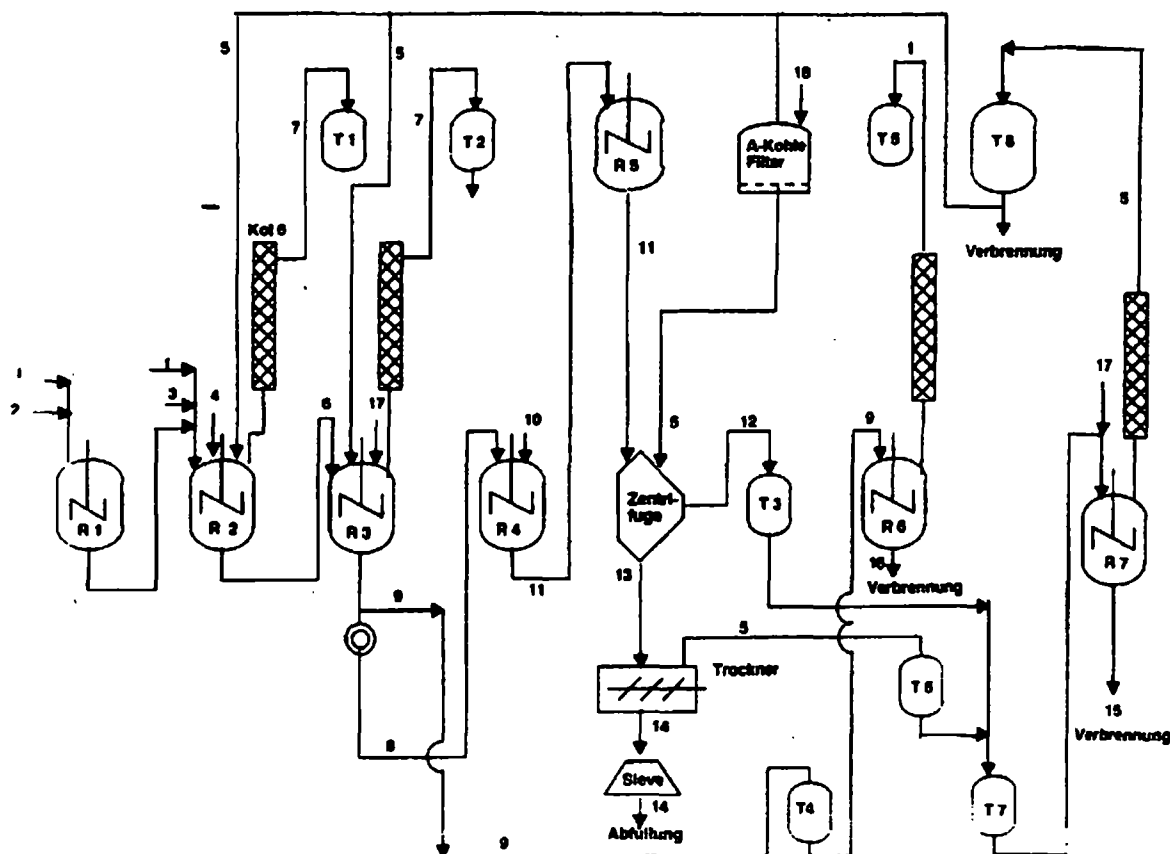
Description of the plant

The plant used for producing cyclanilide is located at the LÜlsdorf site, Feldmühlestraße, D-53859 Niederkassel. The organizational code of the LÜlsdorf pilot plant is: GB FC WL P 3.

The LÜlsdorf pilot plant is designed and suitable for process development and the production of, inter alia, intermediates for agrochemicals. The raw materials required for producing cyclanilide may be used in the LÜlsdorf pilot plant, since the appropriate official authorization has been granted.

The LÜlsdorf pilot plant is equipped with 0.7 – 5 m³ V4A and glass-lined reactors, with stainless-steel columns, with centrifuges and 1 m³ driers for carrying out the operations.

2.2 Flow sheet



Degussa-Hüls

1 Toluol
2 2,4-DCA
3 CDM
4 NM

5 H₂O
6 Reaktionsgemisch
7 MeOH/Toluol
8 Na-CS-DCA·H₂O

9 Toluol HS
10 Ameisensäure
11 CSDCA/H₂O/NaOCHO
12 H₂O/NaOCHO

13 CSDCA feucht
14 CSDCA
15 NaOCHO

16 HS
17 20 % NaOH
18 A-Kohle

T = Tank
R = Reaktor

1 Toluene	5 H ₂ O	9 Toluene:residue	13 cyclanilide moist	16 HB	T = Tank
2 2,4-DCA	6 Reaction mixture	10 Formic acid	14 cyclanilide	17 20% NaOH	R = Reaktor
3 CDM	7 MeOH:toluene	11 cyclanilide·H ₂ O/NaOCHO	15 NaOCHO	18 Activated carbon	
4 NM	8 Na-cyclanilide·H ₂ O	12 H ₂ O NaOCHO			

2.3 Safety:

During the metered addition of NM, the reaction mixture in R 2 passes through a phase of high viscosity. Towards the end of the reaction, the viscosity decreases again.

2.4-Dichloroaniline: Toxic, environmentally hazardous (German Regulation on Hazardous Substances)

Extreme care with respect to work safety is required when working with 2,4-DCA, since the material is classified as being toxic and environmentally hazardous. Efficient exhausting devices are required. Before leaving the plant, all process water has to be examined for 2,4-DCA.

Sodium methoxide 30%: Toxic, corrosive (German Regulation on Hazardous Substances)

Sodium methoxide solution must not come into contact with water, since the sodium hydroxide formed cleaves CDM.

Toluene: Highly flammable (German Regulation on Hazardous Substances)

See specifications for water in Chapter 1

NaOH 20% Corrosive (German Regulation on Hazardous Substances)

Formic acid Corrosive (German Regulation on Hazardous Substances)

The handling of formic acid requires considerable care. Contact between the skin and formic acid results, within a very short period of time, in severe cauterization which heals only very slowly.

Chapter III: Procedures

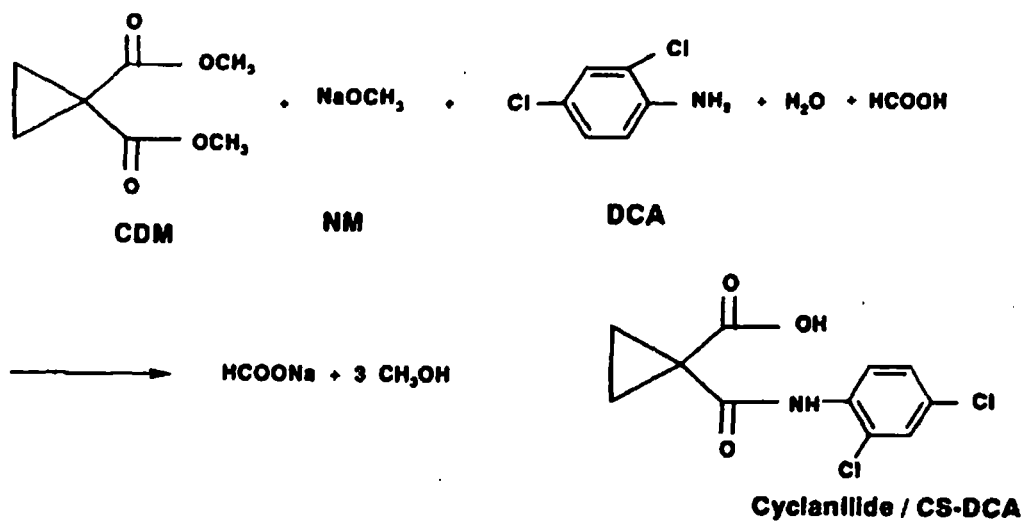
3.1 Chemical basis

Cyclanilide

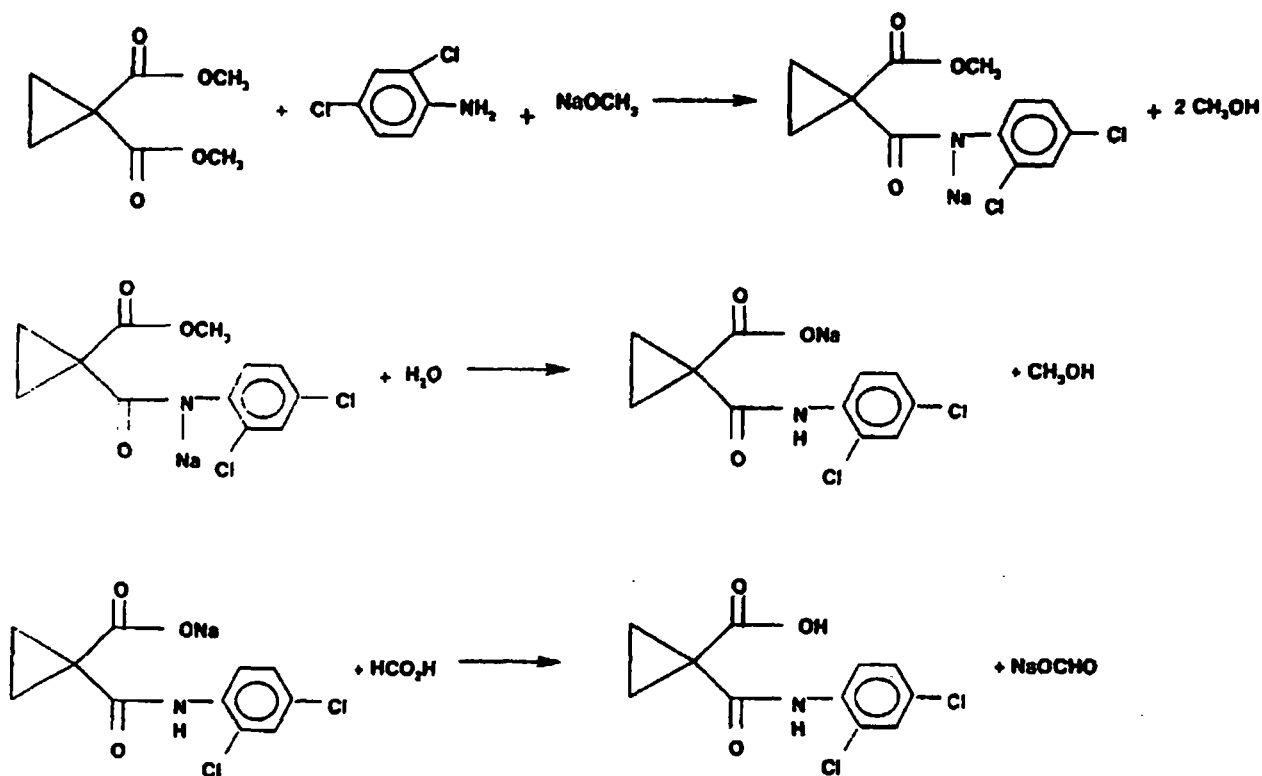
Chemical formula:	$C_{11}H_9Cl_2NO_3$
Molecular weight:	274.1 g/mol
Chemical name:	1-(2,4-dichloroanilinocarbonyl)cyclopropane-1-carboxylic acid
Alternative chemical name:	1-[[[(2,4-dichlorophenyl)amino]carbonyl]cyclopropane-carboxylic acid
CAS number:	113136-77-9

After addition of stoichiometric amounts of NM, CDM reacts on one carboxyl group with 2,4-dichloroaniline to give the amide. The other ester group is, after addition of water, hydrolysed and the target product is precipitated out using formic acid, filtered and dried.

Overall equation:



Single steps:



3.2 Processing steps, process description

Step 1 in R 1:

Material	Amount
Toluene	300 kg
2,4-Dichloroaniline	200 kg

R 1 is charged with 300 kg of toluene. 200 kg of 2,4-DCA are then added into R 1. The mixture is stirred at 35-40°C for 20-30 min. The solution is then ready for use.

Step 2 in R 2:

Material	Amount
Toluene/ 2,4-DCA from R 1	500 kg
Toluene	700 - 750 kg
CDM (100%)	200 kg
NM 30	252 kg
Water	500 - 550 kg

R 2 is charged with the toluene/DCA solution, the toluene and the CDM. The pressure is then reduced to 350-360 hPa and the bottom is heated to 56-59°C. The NM 30 is then metered in at a steady rate over 2-2.5 h. During the metered addition of NM, an MeOH/toluene azeotrope is taken off at the top of the column. After the end of the metered addition of NM, distillation is continued until the bottom temperature has reached 76°C. The bottom is then cooled to 60-65°C. Water is added to R 2. The mixture is stirred for 15-20 min. The batch is subsequently transferred to R 3.

Step 3 in R 3:

Material	Amount
RM from R 2	about 1750 kg
Water	450 - 500 kg

R 3 is filled with the reaction mixture from R 2.

The water is charged into R 3.

R 3 is heated at reflux under atmospheric pressure for 3 h.

When the temperature at the top falls below 70°C, the low boilers are distilled off at the top.

During this operation, the temperature at the top is kept below 70°C.

The RM is then cooled to < 50°C.

pH of the lower phase: > 11.5. If this is not the case, the pH is adjusted using a little NaOH and the hydrolysis is repeated.

A phase separation is carried out. The lower phase is transferred to R 4. The upper phase is transferred to R 6.

Step 4 in R 4:

Material	Amount
Lower phase from R 3	about 1300 kg
Formic acid	about 100 kg

The lower phase of the RM from R 3 is transferred to R 4.

R 4 is cooled to < 25°C, and this temperature is maintained during the precipitation.

Formic acid is charged into R 4 over a period of 1-2 h. The pH is adjusted to 3.8-3.9, and cyclanilide precipitates out of the aqueous RM.

Step 5 in R 5 and centrifuge:

Material	Amount
RM from R 4	1400 kg
Water	about 600 kg

The suspension from R 4 is transferred to R 5 and filtered using the centrifuge. The filtercake on the centrifuge is washed with water.

The filtercake is centrifuged and scraped off.

Step 6 in drier:

Material	Amount
Moist filtercake from the centrifuge	about 350 kg

The moist filtercake from the centrifuge is charged into the drier.

The cyclanilide is dried at 90-95°C and < 50 hPa for 4 h.

Step 7 in R 6:

Material	Amount
Upper phase from R 3	about 930 kg

The upper phase from R 3 is charged into R 6 and the toluene is distilled off. The distillate can be recycled into the reaction. The residue is disposed off by incineration.

Degussa-Hüls

Step 8 in R 7:

Material	Amount
Filtrate from centrifuge	about 1200 kg
Wash filtrate from the centrifuge	about 650 kg
NaOH 20 %	about 100 kg

Filtrate, wash filtrate from the centrifuge and NaOH 20 % are charged into R 7. Water is distilled off until solid residue remains. This is disposed off by incineration.

In-process control

1. The amount of distillate (azeotrope MeOH/toluene) obtained during the reaction in R 2 has to be > 400 kg.
2. pH of the lower phase after the hydrolysis in R 3: > 11.5
3. 2,4-DCA concentration in the outflow of the activated carbon filter < 30 ppm
4. Melting point of the filtercake on the centrifuge: > 189°C
5. Amount of moist solid on the centrifuge: > 330 kg

3.3 Recipe

Raw materials		[kmol]	[kg]	[l]
1	Toluene	-	1040	(1200 l)
2	DCA	1.2342	200	
3	CDM (100%)	1.265 (+ 2.5 %)	200	(174 l)
4	NM 30 (75.6 kg 100 %)	1.397 (+ 13.2 %)	252	(260 l)
5	H ₂ O	-	about 1000	(1000)
10	Formic acid (85 %)	1.94	about 105	(about 89 l)
5	Wash H ₂ O (3 centr., in each case 3 x 60-80 ltr.)		about 650	(about 650 l)
17	NaOH (20 %)	0.5	about 100	(about 90 l)
		Sum:	about 3547	
Products				
16	Toluene bottoms for incineration (from R 6)		about 32	
14	Cyclanilide (86 % yield) (100% yield 338.3 kg)	1.06	290	
1	Toluene distillate		about 920	
7	Azeotrope toluene/MeOH		about 440	
5	H ₂ O distillate		about 1710	
15	Na formate (from R 7)		about 155	
		Sum:	about 3547	

Naturally, the batch sizes laid down in this description are adapted to the equipment in the plant. Batch sizes can be modified as long as the ratios are maintained. Which amounts can be varied and to what extent is described under the individual processing steps. These data are based on experience gained in the plant. There are no experiences or research results on more substantial changes. Accordingly, it cannot be guaranteed that such changes would be successful.

Environmental statement:

All steps carried out in the Lülsdorf pilot plant in connection with the process for preparing cyclanilide are in accordance with current legislation.

Chapter V: Patents

Patent:

DE 4114733	„Verfahren zur Herstellung von substituierten Malonesteraniliden und Malonsäure-monoaniliden“
EP 0512211	„Verfahren zur Herstellung von substituierten Malonesteraniliden und Malonsäure-monoaniliden“
US 5334747	„Method of preparing substituted malonic-acid-anilides and malonic-acid-monoanilides“

Degussa-Hüls

CC C McGee
B Christian
P Fields

**Jim Rone
File Copy**

Item No	Std Factor	Usage Factor	Raw Materials Used	Finish Goods			Dr	Cr
				Used	Pkg'd	Mfg'd		
DCA	3020					1,485,841		
UDCB	41000	1 1300	1 0316	1,532,741			S 701	1420 1,515,557 82 C 153 6740 (1,515,557 82)
Nitro Acid	41020	4970	0 4756	706,706			C 153	5520 567,114 17 S 703 1460 (567,114 17)
Sulfonic Acid	41010	9550	0 6885	1,320,233			C 153	5640 113,072 96 S 705 1460 (113,072 96)
Plat/Carb Cat	41070	0003	0 0004	608			C 153	5530 52,809 32 S 704 1460 (52,809 32)
Hydrogen	41030	0510	0 0561	83,345				S 711 1460 (52 288 00)
Soda Ash	41050	0110	0 0010	1,456			C 153	5570 100,014 00 S 706 1460 (100,014 00)
Lime	41060	0305	0 0278	41,300			C 153	5850 59,185 04 S 708 1460 (189 26)
50% Rayon Caustic	45090	0182	0 0195	29,022				S 709 1460 (2,891 00)
Hydrogen Peroxide	41090	0050	0 0044	6,500				S 782 1460 (2,321 76)
Methanol	42640							S 780 1460 (1,495 00)
TEPA		0006	0 0011	1,657				S 735 1460
Ferrous Sulfate		0001	0 0001	112				
Propanil Tech	3000					1,787,920	S 702	1420 1,805,789 20 C 154 6740 (1,805,789 20)
OCA-3rd Party	40100	0 7550					C 154	5630 S 710 1460
OCA-Cedar	3020	0 7550	0 7477		1,336,850		C 154	6840 1,383,587 00 S 701 1420 (1,383,587 00)
P Acid	40200	0 3707	0 3692	660,076			C 154	5640 158,418 24 S 712 1460 (158,418 24)
P Anthy	40300	0 0150	0 0523	93,540			C 154	5650 86,056 80 S 714 1460 (86,056 80)
Flated Tech	3050					1,012,500	S 804	1420 1,063,125 00 C 155 6740 (1,063,125 00)
P Tech	3000	1 000	1 000		1,012,500		C 155	6810 1,022,625 00 S 702 1420 (1,022,625 00)
3#	3200					6,251	S 802	1420 38,193 61 C 161 6740 (38,193 61)
P Tech	3000	3 2159	3 1611		19,760		C 161	6810 19,857 60 S 702 1420 (19,857 60)
Isoph	40500	2 2500	2 3958	14,978			C 161	5680 8,388 56 S 717 1460 (8,388 56)
MO	40400						C 161	5660 S 716 1460
Emul	40600	0 0143					C 161	5670 S 718 1460
Aromatic B	40800	1 8120	1 8237	11,400			C 161	5685 1,710 00 S 719 1460 (1,710 00)
Armul	40900	1 2683	1 3198	8,250			C 161	5675 6,270 00 S 720 1460 (6,270 00)
Sun Oil	41640	0 4300	0 4399	2,750			C 161	5650 440 00 S 769 1460 (440 00)
Tennaco 500	45320						C 161	5685 S 797 1460
Cone Blend								
Stepfac								
4#	3300						S 817	1420 C 162 6740
P Tech	3000	4 1500					C 162	6810 S 702 1420
F Tech	3050						C 162	6835 S 804 1420
Isoph	40500	0 7200					C 162	5680 S 717 1460
M O	40400	2 7400					C 162	5680 S 716 1460
Emul	40600	0 9250					C 162	5670 S 718 1460
Isoph/Mitak	41080						C 162	5780 S 721 1460
Aromatic B	40600						C 162	5685 S 719 1460
Armul	40900						C 162	5675 S 720 1460
4# X	3300						S 817	1420 C 162 6740
P Tech	3000	4 1270					C 162	6810 S 702 1420
M O	40400	1 7620					C 162	5680 S 716 1460
Isoph	40500	1 6880					C 162	5680 S 717 1460
Emul	40600	0 7820					C 162	5670 S 718 1460
Aromatic B	40800	0 0503					C 162	5685 S 719 1460
Armul	40900	0 3944					C 162	5675 S 720 1460
Sun Oil	41640	0 3041					C 162	5650 S 769 1460
Stara	3400					161,833	S 811	1420 1,182,999 23 C 170 6740 (1,182,999 23)
P Tech	3000	4 1270	4 1929		678,550		C 170	6810 685,335 50 S 702 1420 (685,335 50)
F Tech	3050						C 170	6835 S 804 1420
Isoph/Mitak	41080	3 9280	3 9119	633,074			C 170	5780 329,198 48 S 721 1460 (329,198 48)
Emul	40600	0 9030	0 9879	159,870			C 170	5670 111,909 00 S 718 1460 (111,909 00)
Isoph	40500						C 170	5680 S 717 1460
MO	40400						C 170	5650 S 716 1460

ADEQ0011536

Butox 175 Pkg'd (cont'd)	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs						
Citric Acid	41590	0 2800											
Butox 200 Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs						
Butoxone 200 4x1	15560												
Butox 200 Bulk Used	15200	1 0000											
2 4, D B Acid	41550	2 0800											
60% DMA	41580	1 1000											
Citric Acid	41590	0 4200											
Jugs-1 gal plastic	44100												
ICC-Cordella Cont'd	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs						
Butox 200 Packaged Cont	15540												
Butoxone 200 2x2 5	15200	1 0000											
Butox 200 Bulk Used	41550	2 0800											
2 4, D B Acid	41580	1 1000											
60% DMA	41590	0 4200											
Citric Acid	44200												
Jugs-2 5 gal plastic	15570												
Butoxone 200 55	15200	1 0000											
Butox 200 Bulk Used	41550	2 0800											
2 4, D B Acid	41580	1 1000											
60% DMA	41590	0 4200											
Citric Acid													

Shipped from Plant:

	Item No	Location	Containers	lbs/gals
Prop Tech	3000	4 Plant		
DCA	3020	4 Plant		160,600
Duron	3030	4 Plant		
Flake Tech	3050	4 Plant		
Flake Tech 25KG	3060	4 Plant	960	52,896
3# 50 L	3190	4 Plant		
3# Bulk	3200	4 Plant		
3# 55's	3210	4 Plant		
3# 20L	3220	4 Plant		
3# 200L	3250	4 Plant	100	5,284
4# 20L	3280	4 Plant		
4# Bulk	3300	4 Plant		
4# 55's	3310	4 Plant		
4# 210 L	3320	4 Plant		
4# 200 L	3330	4 Plant		
4# 35's	3340	4 Plant		
Stam Bulk	3400	4 Plant		
Stam 35's	3420	4 Plant		
Propanil 360 210L	10020	4 Plant		
Ethephon 100%	15740	4 Plant		
Tromethamine Bulk	17000	4 Plant		
Them 25 KG	17020	4 Plant		
Tromethamine 25KG	17120	4 Plant		
Trometamol 50KG	17240	4 Plant		
Tne Ultra Pure 100Kg	17250	4 Plant		
Pure Tne-Hcl 100Kg	17260	4 Plant		
Tne Ultra Pure 25Kg	17770	4 Plant		
MO	40400	4 Plant		
Isoph	40500	4 Plant		
4# Emul	40600	4 Plant		
Emul	40900	4 Plant		
TA-40 Waste Water		4 Plant		

Shipped from O/S Plant:

	Item No	Location	Containers	lbs/gals
DCA	3020	97 In Transit		141,096
Duron Std	3030	10 B/H		62,400
Duron Std	3030	52 Gulf States		324,078
Duron Std	3030	97 In Transit		
Duron B Grade	3040	4 Pt		
Flaked Tech	3050	10 B/H		550,500
Flaked Tech	3050	78 Odorn-Pachuta		
Flaked Tech	3050	86 Odorn		
Flaked Tech 25Kg	3060	78 Odorn-Pachuta		
Flaked Tech 25Kg	3060	86 Odorn		
Duron Col 224 Kg	3070	88 Odorn		
Wham! EZ 2x2 5 gal	3180	10 B/H		
Wham! EZ 2x2 5 gal	3180	88 Odorn		

Shipped from O/S Plant Cont'd:

	Item No	Location		Containers	Lbs/Gals
Wham 100 Ltr	3230	88	Odom		
Wham 30gls	3240	10	B/H		
Wham 30gls	3240	59	Rice Farmers		
Wham 30gls	3240	78	Odom-Pachuta		
Wham 30gls	3240	88	Odom		
Wham 30gls	3240	88	Amer Rice		
Wham 5gls	3260	10	B/H		
Wham 5gls	3260	88	Odom		
Wham 5gls	3260	88	Amer Rice		
4# 35	3340	10	B/H	1,500	52,500
4# 35	3340	15	Amer Whse		
4# 35	3340	59	Rice Farmers		
Super Wham 30	3350	10	B/H		
Super Wham 30	3350	15	Amer Whse		
Super Wham 30	3350	59	Rice Farmers		
Super Wham 30	3350	78	Odom-Pachuta		
Super Wham 30	3350	88	Odom		
Super Wham 2x2 5	3360	10	B/H		
Super Wham 2x2 5	3360	88	Odom		
Super wham Bulk	3370	88	Odom		
Stam 35	3420	10	B/H		
Duet 30	3430	10	B/H		
Duet 30	3430	78	Odom-Pachuta		
Duet 30	3430	88	Odom		
Butox 200 Bulk	15200	57	HCC-Cordale		
Butox 175 2x2 5	15240	10	B/H		
Butox 175 2x2 5	15240	20	Gray-Albany		
Butox 175 2x2 5	15240	21	Gray-Ashburn		
Butox 175 2x2 5	15240	30	AWS		
Butox 175 2x2 5	15240	57	HCC-Cordale		
Butox 175 4x1	15260	10	B/H		
Butox 175 4x1	15260	11	Casco		
Butox 175 4x1	15260	20	Gray-Albany		
Butox 175 4x1	15260	21	Gray-Ashburn		
Butox 175 4x1	15260	30	AWS		
Butox 175 4x1	15260	57	HCC-Cordale		
Butox 200 2x2 5	15540	10	B/H		
Butox 200 2x2 5	15540	15	American W/H	576	2,880
Butox 200 2x2 5	15540	20	Gray-Albany		
Butox 200 2x2 5	15540	21	Gray-Ashburn		
Butox 200 2x2 5	15540	30	AWS		
Butox 200 2x2 5	15540	35	Robertson		
Butox 200 2x2 5	15540	57	HCC-Cordale		
Butox 200 4x1	15560	10	B/H		
Butox 200 4x1	15560	11	Casco		
Butox 200 4x1	15560	15	American W/H		
Butox 200 4x1	15560	20	Gray-Albany		
Butox 200 4x1	15560	21	Gray-Ashburn		
Butox 200 4x1	15560	30	AWS		
Butox 200 4x1	15560	35	Robertson		
Butox 200 4x1	15560	57	HCC-Cordale		
Butox 7500 10x2 33	15580	10	B/H		
Butox 7500 10x2 33	15580	15	American W/H	352	8,202
Butox 7500 10x2 33	15580	20	Gray-Albany		
Butox 7500 10x2 33	15580	21	Gray-Ashburn		
Butox 7500 10x2 33	15580	88	Odom		
Butox 7500 10x2 33	15580	30	AWS		
Ethephon	15740	78	Odom-Pachuta		
Tromethamine 25Kg	17120	31	Mentex	420	23,150
Tromethamine 25Kg	17120	16	Antwerp	65	3,583
2,4 DB Acid	41550	97	In Trans		
Mt 30 gal drum	42100	88	Odom-Waynesboro		

Transfers:

	Item No	From		To	Cases/Drums	Gals/Lbs
OCA	3020	4	Pit	97	In Trans	
OCA	3020	4	Pit	100	EMV-Hungary	
OCA	3020	97	In Transit	4	Pit	
NCA	3020	97	In Transit	52	Gulf States	
UCA	3020	97	In Transit	100	EMV-Hungary	

Transfers Cont'd:

	Item No	From	To	Cases/Drums	Gals/Lbs
CA	3020	100 EMV-Hungary	4 Pit		
Curon	3030	4 Pit	10 B/H		
Curon	3030	4 Pit	86 Odom		
Curon	3030	10 B/H	4 Pit		
Curon	3030	10 B/H	86 Odom		
Curon	3030	78 Odom-Pachuta	4 Pit		
Curon	3030	86 Odom	78 Odom-Pachuta		
Curon	3030	97 In Transit	52 Gulf States		908,097
Curon B Grade	3040	4 Pit	10 B/H		
Curon B Grade	3040	10 B/H	4 Pit		
Flake Tech	3050	4 Pit	10 B/H		945,000
Flake Tech	3050	4 Pit	58 HCC-W/H		
Flake Tech	3050	4 Pit	78 Pachuta		
Flake Tech	3050	4 Pit	86 Odom		
Flake Tech	3050	10 B/H	4 Pit		48,500
Flake Tech	3050	10 B/H	86 Odom		
Flake Tech	3050	10 B/H	58 HCC-W/H		
Flake Tech	3050	10 B/H	78 Pachuta		
Flake Tech	3050	86 Odom	4 Pit		
Flake Tech	3050	86 Odom	10 B/H		
Flake Tech	3050	86 Odom	78 Odom-Pachuta		
Flake Tech 25KG	3060	86 Odom	4 Pit		
Flake Tech 25KG	3060	86 Odom	78 Odom-Pachuta		
Flake Tech 25KG	3060	4 Pit	86 Odom		
Wham 2x2 5	3180	10 B/H	4 Pit		
Wham 2x2 5	3180	10 B/H	86 Odom Ind		
Wham 2x2 5	3180	86 Odom Ind	4 Pit		
Wham 2x2 5	3180	86 Odom Ind	10 B/H		
W 20L	3220	25 Platte	4 Pit		
W 20L	3220	4 Pit	25 Platte		
Wham 30	3240	4 Pit	86 Odom		
Wham 30	3240	4 Pit	10 B/H		
Wham 30	3240	10 B/H	59 Rice Farmers		
Wham 30	3240	10 B/H	86 Odom		
Wham 30	3240	10 B/H	88 American Rice		
Wham 30	3240	59 Rice Farmers	10 B/H		
Wham 30	3240	88 Odom Ind	4 Pit		
Wham 30	3240	88 Odom Ind	10 B/H		
Wham 30	3240	88 Odom Ind	59 Rice Farmers		
Wham 30	3240	88 Odom Ind	88 Amer Rice		
Wham 30	3240	88 Amer Rice	10 B/H		
Wham 5	3260	4 Pit	86 Odom		
Wham 5	3260	10 B/H	4 Pit		
Wham 5	3260	10 B/H	86 Odom Ind		
Wham 5	3260	88 Odom Ind	88 American Rice		
Wham 5	3260	88 Odom Ind	10 B/H		
Wham 5	3260	88 Odom Ind	4 Pit		
Wham 5	3260	88 American Rice	10 B/H		
4# 35's	3340	4 Pit	10 B/H	565	20,475
4# 35's	3340	4 Pit	15 American		
4# 35's	3340	4 Pit	59 Rice Farmers		
4# 35's	3340	10 B/H	4 Pit		
4# 35's	3340	10 B/H	15 American		
4# 35's	3340	15 American	4 Pit		
4# 35's	3340	59 Rice Farmers	4 Pit		
4# 35's	3340	59 Rice Farmers	10 B/H		
4# 35's	3340	88 American Rice	4 Pit		
Super Wham 30	3350	4 Pit	10 B/H		
Super Wham 30	3350	10 B/H	15 Amer Whse		
Super Wham 30	3350	10 B/H	59 Rice Farmers		
Super Wham 30	3350	10 B/H	86 Odom		
Super Wham 30	3350	10 B/H	78 Odom-Pachuta		
Super Wham 30	3350	15 Amer Whse	86 Odom		
Super Wham 30	3350	15 Amer Whse	10 B/H		
Super Wham 30	3350	59 Rice Farmers	10 B/H		
Super Wham 30	3350	78 Odom Pachuta	86 Odom		
Super Wham 30	3350	78 Odom Pachuta	10 B/H		
Super Wham 30	3350	86 Odom Ind	4 Pit		
Super Wham 30	3350	86 Odom Ind	10 B/H		

Transfers Cont'd:	Item No	From	To	Cases/Drums	Gals/Lbs
Super Wham 30	3350	86 Odum Ind	15 Amer White		
Super Wham 30	3350	86 Odum Ind	59 Roe Farmers		
Super Wham 2x2 5	3360	4 PR	10 B/H		
Super Wham 2x2 5	3360	4 PR	86 Odum Ind		
Super Wham 2x2 5	3360	10 B/H	4 PR		
Super Wham 2x2 5	3360	10 B/H	86 Odum Ind		
Super Wham 2x2 5	3360	78 Odum-Pachuta	86 Odum Ind		
Super Wham 2x2 5	3360	86 Odum Ind	4 PR		
Super Wham 2x2 5	3360	88 Odum Ind	10 B/H		
Super Wham 2x2 5	3360	86 Odum Ind	78 Pachuta		
Stam 35	3420	4 PR	10 B/H	3,630	127,050
Stam 35	3420	10 B/H	4 PR		
Duet 30	3430	10 B/H	86 Odum-Waynesboro		
Duet 30	3430	88 Odum Ind	10 B/H		
Duet 30	3430	10 B/H	78 Pachuta		
Duet 30	3430	78 Odum-Pachuta	10 B/H		
Duet 30	3430	88 Odum Ind	78 Pachuta		
Butox 200 Butk	15200	97 In Transit	57 HCC Cordate		
Butox 175 2x2 5	15240	10 B/H	57 HCC Cordate		
Butox 175 2x2 5	15240	11 Casco	10 B/H		
Butox 175 2x2 5	15240	20 Gray-Albany	21 Gray-Ashburn		
Butox 175 2x2 5	15240	20 Gray-Albany	57 HCC Cordate		
Butox 175 2x2 5	15240	21 Gray-Ashburn	10 B/H		
Butox 175 2x2 5	15240	21 Gray-Ashburn	20 Gray-Albany		
Butox 175 2x2 5	15240	21 Gray-Ashburn	57 HCC Cordate		
Butox 175 2x2 5	15240	21 Gray-Ashburn	30 AWS		
Butox 175 2x2 5	15240	57 HCC-Cordate	10 B/H		
Butox 175 2x2 5	15240	57 HCC-Cordate	11 Casco		
Butox 175 2x2 5	15240	57 HCC-Cordate	20 Gray-Albany		
Butox 175 2x2 5	15240	57 HCC-Cordate	21 Gray-Ashburn		
Butox 175 2x2 5	15240	57 HCC-Cordate	30 AWS		
Butox 175 4x1	15260	10 B/H	4 PR		
Butox 175 4x1	15260	10 B/H	21 Gray-Ashburn		
Butox 175 4x1	15260	10 B/H	57 HCC Cordate		
Butox 175 4x1	15260	20 Gray-Albany	10 B/H		
Butox 175 4x1	15260	20 Gray-Albany	21 Gray-Ashburn		
Butox 175 4x1	15260	20 Gray-Albany	30 AWS		
Butox 175 4x1	15260	20 Gray-Albany	57 HCC Cordate		
Butox 175 4x1	15260	21 Gray-Ashburn	10 B/H		
Butox 175 4x1	15260	21 Gray-Ashburn	11 Casco		
Butox 175 4x1	15260	21 Gray-Ashburn	20 Gray-Albany		
Butox 175 4x1	15260	21 Gray-Ashburn	30 AWS		
Butox 175 4x1	15260	21 Gray-Ashburn	57 HCC Cordate		
Butox 175 4x1	15260	30 AWS	20 Gray-Albany		
Butox 175 4x1	15260	57 HCC-Cordate	10 B/H		
Butox 175 4x1	15260	57 HCC-Cordate	11 Casco		
Butox 175 4x1	15260	57 HCC-Cordate	20 Gray-Albany		
Butox 175 4x1	15260	57 HCC-Cordate	21 Gray-Ashburn		
Butox 175 4x1	15260	57 HCC-Cordate	30 AWS		
Butox 200 2x2 5	15540	10 B/H	11 Casco		
Butox 200 2x2 5	15540	10 B/H	15 American		
Butox 200 2x2 5	15540	10 B/H	35 Robertson		
Butox 200 2x2 5	15540	10 B/H	57 HCC-Cordate		
Butox 200 2x2 5	15540	11 Casco	10 B/H		
Butox 200 2x2 5	15540	11 Casco	30 AWS		
Butox 200 2x2 5	15540	11 Casco	57 HCC-Cordate		
Butox 200 2x2 5	15540	15 American	57 HCC		
Butox 200 2x2 5	15540	15 American	35 Robertson		
Butox 200 2x2 5	15540	20 Gray-Albany	4 PR		
Butox 200 2x2 5	15540	20 Gray-Albany	15 American		
Butox 200 2x2 5	15540	20 Gray-Albany	35 Robertson		
Butox 200 2x2 5	15540	20 Gray-Albany	57 HCC Cordate		
Butox 200 2x2 5	15540	21 Gray-Ashburn	15 American		
Butox 200 2x2 5	15540	21 Gray-Ashburn	30 AWS		
Butox 200 2x2 5	15540	21 Gray-Ashburn	35 Robertson		
Butox 200 2x2 5	15540	21 Gray-Ashburn	15 American		
Butox 200 2x2 5	15540	30 AWS	15 American		
Butox 200 2x2 5	15540	30 AWS	35 Robertson		
Butox 200 2x2 5	15540	35 Robertson	15 American		

Transfers Cont'd:	Item No	From	To	Cases/Drums	Gals/Lbs
Hutox 200 2x2 5	15540	57 HCC-Cordale	10 B/H		
Hutox 200 2x2 5	15540	57 HCC-Cordale	15 American		
Hutox 200 2x2 5	15540	57 HCC-Cordale	20 Gray-Albany		
Hutox 200 2x2 5	15540	57 HCC-Cordale	21 Gray-Ashburn		
Hutox 200 2x2 5	15540	57 HCC-Cordale	30 AWS		
Hutox 200 2x2 5	15540	57 HCC-Cordale	35 Robertson		
Hutox 200 4x1	15560	10 B/H	11 Casco		
Hutox 200 4x1	15560	11 Casco	10 B/H		
Hutox 200 4x1	15560	11 Casco	35 Robertson		
Hutox 200 4x1	15560	15 Amer Whse	35 Robertson		
Hutox 200 4x1	15560	20 Gray-Albany	30 AWS		
Hutox 200 4x1	15560	20 Gray-Albany	35 Robertson		
Hutox 200 4x1	15560	21 Gray-Ashburn	30 AWS		
Hutox 200 4x1	15560	57 HCC-Cordale	20 Gray-Albany		
Hutox 200 4x1	15560	57 HCC-Cordale	21 Gray-Ashburn		
Hutox 200 4x1	15560	57 HCC-Cordale	35 Robertson		
Hutox 7500 DF 10x2 32	15580	4 PIt	10 B/H		
Hutox 7500 DF 10x2 33	15580	4 PIt	15 American		
Hutox 7500 DF 10x2 33	15580	10 B/H	15 American		
Hutox 7500 DF 10x2 33	15580	15 American	10 B/H		
Hutox 7500 DF 10x2 33	15580	21 Gray-Ashburn	15 American		
Hutox 7500 DF 10x2 33	15580	20 Gray-Albany	15 American		
Hutox 7500 DF 10x2 33	15580	88 Odom	10 B/H		
Hutox 7500 DF 10x2 33	15580	88 Odom	21 Gray-Ashburn		
Hutox 7500 DF Bulk	15590	88 Odom	4 pIt		
Frommethamine Bulk	17000	4 PIt	31 Mentex		
Frommethamine Bulk	17000	31 Mentex	4 PIt		20,714
Frommethamine 25 Kg	17120	10 B/H	4 PIt		
Frommethamine 25 Kg	17120	4 PIt	31 Mentex		
Frommethamine 25 Kg	17120	4 PIt	16 Antwerp	720	39,686
Frommethamine 25 Kg	17120	31 Mentex	4 PIt		
Frommethamine 25 Kg	17120	31 Mentex	16 Antwerp		
Ins Ultra Pure 25 Kg	17270	4 PIt	16 Antwerp		
Ins Ultra Pure 25 Kg	17270	4 PIt	31 Mentex		
Ins Ultra Pure 25 Kg	17270	31 Mentex	4 pIt		
OCPI	40150	4 PIt	52 Gulf States		27,560
OCPI	40150	52 Gulf States	4 PIt		
OCPI	40150	97 In-Transit	52 Gulf States		335,871
OCPI	40150	97 In-Transit	4 PIt		41,687
ODCB	41000	97 In-Transit	4 PIt		
Hi Sol 233	41500	10 B/H	88 Odom-Waynesboro		
2,4 D-B Acid	41550	20 Gray-Albany	57 HCC-Cordale		
2,4 D-B Acid	41550	20 Gray-Albany	88 Odom-Waynesboro		
2,4 D-B Acid	41550	21 Gray-Ashburn	57 HCC-Cordale		
2,4 D-B Acid	41550	88 Odom	10 B/H		
Citric Acid	41590	57 HCC-Cordale	20 Gray-Albany		
Stepwet	41810	10 B/H	88 Odom-Waynesboro		
Con't Clay	41820	10 B/H	88 Odom-Waynesboro		
Ethaphon	41880	4 PIt	88 Odom-Waynesboro		
Soprophor	41890	78 Pachuta	88 Odom-Waynesboro		
Molinate	41760	97 In-Transit	4 plant		43,872
Mt 30 gallon Drums	42100	88 Odom	78 Odom-Pachuta		
Mt 30 gallon Drums	42100	88 Odom	4 pIt		
Mt 30 gallon Drums	42100	10 B/H	78 Odom-Pachuta		
Mt 30 gallon Drums	42100	4 pIt	88 Odom-Waynesboro		
Nitromethane	42680	10 B/H	4 PIt		
1 Gal jug mt	44100	20 Gray-Albany	57 HCC-Cordale		
1 Gal jug mt	44100	57 HCC-Cordale	20 Gray-Albany		
2 5 Gal jug mt	44200	57 HCC-Cordale	78 Odom-Pachuta		
2 5 Gal jug mt	44200	57 HCC-Cordale	20 Gray-Albany		
2 5 Gal jug mt	44200	78 Odom-Pachuta	88 Odom-Waynesboro		
2 5 Gal jug mt	44200	88 Odom	78 Odom-Pachuta		
Arquar 2C75	45120	88 Odom	78 Odom-Pachuta		
Irgalite Blue Dye	45130	88 Odom	78 Odom-Pachuta		
1/2 Gal Mt	45150	88 Odom	78 Odom-Pachuta		
Kutschlor	45200	88 Odom	78 Odom-Pachuta		

Raw Materials Received:	Item No	Lbs	Cardale/Gray	Item No	Gals/Lbs	
OCA	3020					
Plaste Tech	3050					
P Acid	40200	671,840	60 % DMA	41580		
P Anhy	40300	(BU. 182)	Citric Acid	41590		
Raw Materials Received Cont'd:	Item No	Lbs		Item No	Gals/Lbs	Albany
M O	40400		2,4 D-B Acid	41550		
Isoph/Mixk	41080	679,280	Jugs-1 gal plastic	44100		
Isoph	40500	43,840	Jugs-2 5 gal Plast	44200		
Emul	40800	223,440				
Aromatic B	40800		Odom-Waynesboro			
Amul	40900		Carbyl Tech	41670		
Mixk	41300		Steparse	41600	3,150	
Ethephon	41680		Glycerine	41480		
MCPA-IOE	40930		Albanc	41480		
55 Crystal Litho	42550		HiSil	41500		
55 mt's Black	42300		Poly O	41470		
35 mt's Plastic	42220	3,840	Mohwet	41460		
35 mt's Plastic	42230	351	30 mt's	42100		
Cone Blend			2 5 gal jugs	44200		
Stepfac			Citric Acid	41590		
50L mt's			Veegum	41570		
ODCB	41000	1,486,050	Continental Clay	41620	6,000	
Sulfuric Acid	41010	1,399,400	Kelzan	41510		
Nitric Acid	41020	750,620	DC Antifoam	45140		
Soda Ash	41050		Arquad	45100		
Lime	41060	30,000	Arquar 2C75	45120		
Caustic 50%	41530		Irgalite	45130		
50% Rayon Caus	45090	44,560	Sorpropher 4D38	41690		
Cleaning Solution		4,844	Mt 30's Fibre			
Ethephon	41680		Stepwet	41610	200	
Platinum	41040 (In Transit)		Proxel	41730		
Catalyst	41070	682	Butachlor	45200		
Peroxide	41080		Ucasode	41750		
Hydrogen	41030	72,100	Odom-Pachuta			
Methanol	42640		2,4 D-B Acid	41550	44,082	
mt 55's			Mt 30's	42100		
TEPA			Transil-N O			
Ferrous Sulfate			Odom-Pachuta Cont'd			
15 gal Mt's			Ethephon	41680		
Sun Oil	41640		Gray Dist			
Morpholine	41630		2,4 D-B Acid	41550	In Transit	
55 gal Plastic			2,4 D-B Acid	41550	Albany	
5 mt's	42000		DCPI	40150		
30 mt's			TA			
20 L mt's	42000 Platt		50% Caustic	45090		
2 5 mt's	44200		Nitromethane	42680		
Duron:			Formaldehyde	41540		
Heptane	41680		Methanol	42640		
Sulfuric Acid	41520		Raney Nickel	42690		
Anhydrous DMA	41650		Sulfuric Acid	41010		
PMC 5-Nitro:			Sodium Bisulfide			
Step 3	90800		DMA	42700		
Step 4	90810		Calcium Chloride			
Step 5	90820		Caustic 50%	41530		
Calcium Chloride	90830		Sulfuric Acid	41520		
Chlorine	90720					
A Sulfate	90710		Blackhawk:			
G Acid	90700		Nitromethane	42680		
50% Caustic	45090		2 5 Mt jugs	44200		
20% Oleum	90770		Mt 30's	42100		
Methanol	90780					
Isobutyl Anti	90740		Acfluorfen:			
Iodene	90780		50% Caustic	41530	249,780	
			Mixed Nitrating Ar	41700		
			Acids. Antipyrine	41710	2,114,21	
			98 % Sulfuric Acid	41010		
			Nitric Acid	41020		

Item No	Gals/Lbs
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Product	Item No	Location
Propanil Tech	3000	4 Plant
DCA	3020	97 In Transit
DCA	3020	100 EMV-No Hungaran
Flaked Tech	3050	4 Plant
Flaked Tech	3050	10 B/H
Flaked Tech	3050	78 Odorn-Pachuta
Flaked Tech	3050	86 Odorn
Flaked Tech 25 Kg	3060	4 Plant
Flaked Tech 25 Kg	3060	78 Odorn-Pachuta
Flaked Tech 25 Kg	3060	86 Odorn
Duron Std Grade	3030	4 Plant
Duron Std Grade	3030	10 B/H
Duron Std Grade	3030	97 In Transit
Duron B Grade	3040	4 Plant
Wham 2x2 5	3180	10 B/H
Wham 2x2 5	3180	86 Odorn
4# 55's	3210	4 Plant
4# 20 L	3220	25 Plant
Wham 30's	3240	10 B/H
Wham 30's	3240	78 Odorn-Pachuta
4# Propanil 200L	3250	4 Plant
Wham 5	3260	4 Plant
Wham 5	3280	10 B/H
Wham 5	3260	86 Odorn
4# Bulk	3300	4 Plant
4# 35	3340	4 Plant
4# 35	3340	15 American
4# 55's	3310	4 Plant
4# 210L	3320	4 Plant
Super Wham 30 g	3350	15 American
Super Wham 30 g	3350	78 Odorn-Pachuta
Super Wham 30 g	3350	86 Odorn
Super Wham 2x2 5	3360	10 B/H
Prop Tech	3000	4 Plant
Flake Tech	3050	4 Plant
Flake Tech	3050	86 Odorn-Waynesboro
Flaked Tech 25 Kg	3060	86 Odorn-Waynesboro
Wham 2x2 5	3180	10 B/H
Wham 30	3240	10 B/H
Wham 30	3240	86 Odorn-Waynesboro
Prop 4# 210 L	3320	4 Plant
4# 35's	3340	4 Plant

ADEQ0011536

Adjustments to Inventory (Per physical; samples; etc.):

Product	Item No	Location	Type Adj	Cases/Drums	Gals/Lbs						
4# 33's	3340	10 B/H	Adj-Inv			C	3069	5100	S	814	1420
Super Wham 30	3350	10 B/H	Adj to Physical	(249)	(7,470)	C	164	6740	55,128 60	S	831 1420 (55,128 60)
Super Wham 2x2 5	3360	86 Odom-Waynesboro	Adj-Inv			C	864	7700		S	834 1420
Super Wham 2x2 5	3360	10 B/H	Adj-Inv			C	3064	5100		S	834 1420
Super Wham 2x2 5	3360	86 Odom	Adj-Inv	(256)	(1,280)	C	164	6740	9,446 40	S	834 1420 (9,446 40)
Super Wham Bulk	3370	86 Odom	Adj-Inv		(3)	C	164	6740	20 58	S	856 1420 (20 58)
Duet 30's	3430	10 B/H	Adj-Inv	(151)	(4,530)	C	159	6740	33,204 90	S	823 1420 (33,204 90)
Duet 30's	3430	78 Odom-Pachuta	Adj-Inv	(159)	(4,770)	C	159	6740	34,964 10	S	823 1420 (34,964 10)
Duet 30's	3430	86 Odom-Waynesboro	Adj-Inv	(108)	(3,240)	C	159	6740	23,749 20	S	823 1420 (23,749 20)
Propanil 360 210L	10020	4 Plant	Repackage			C	3067	5100		S	826 1420
Butox 175 2x2 5	15240	57 HCC-Cordele	Inv Adj			C	410	5100		S	410 1420
Butox 175 2x2 5	15240	10 B/H	Inv Adj			C	410	5100		S	410 1420
Butox 175 2x2 5	15240	20 Gray-Albany	Inv Adj			C	410	5100		S	410 1420
Butox 175 4x1	15260	10 B/H	Inv Adj	1	4	C	410	5100	(43 20)	S	410 1420 43 20
Butox 175 4x2	15261	12 Casco	Samples			C	410	7700		S	411 1421
Butox 175 4x1	15260	20 Gray-Albany	Inv Adj			C	410	5100		S	410 1420
Butox 200 2x2 5	15540	10 B/H	For Samples			C	430	7700		S	850 1420
Butox 200 2x2 5	15540	57 HCC-Cordele	Inv Adj			C	430	5100		S	430 1420
Butox 200 2x2 5	15540	20 Gray Albany	Inv Adj			C	430	5100		S	430 1420
Butox 200 2x2 5	15540	15 American	Inv Adj			C	430	5100		S	430 1420
Butox 200 4x1	15560	57 HCC-Cordele	Inv Adj			C	430	5100		S	430 1420
Butox 7500 DF 10x2 33	15580	20 Gray-Albany	Inv Adj			C	420	5100		S	850 1420
Butox 7500 DF 10x2 33	15580	10 B/H	Samples			C	420	7700		S	850 1420
Ethephon	15740	21 Gray-Ashburn	Set Up Finish Goods			C	187	6740		S	851 1420
Ethephon	15740	78 Odom-Pachuta	Set Up Finish Goods								
Fromethemine Bulk	17000	4 Plant	Adj-Inv			C	3683	5100		S	849 1420
Fromethemine Bulk	17000	31 Mantex	Adj-Inv			C	3683	5100		S	849 1420
Fromethemine 25 Kg	17120	4 Plant	Adj-Inv	720	18,000	C	3683	5100	(149,580 00)	S	843 1420 149,580 00
Fromethemine 25 Kg	17120	31 Mantex	Samples	(1)	(55)	C	3683	5100	207 75	S	843 1420 (207 75)
Frometamol 50 Kg	17240	4 Plant	Adj-Inv			C	3683	5100		S	847 1420
Ins Ultra Pure 100Kg	17250	4 Plant	Adj-Inv			C	3683	5100		S	853 1420
Pure Tris-Hcl, 100Kg	17260	4 Plant	Adj-Inv			C	3683	5100		S	855 1420
Ins Ultra Pure 25Kg	17270	4 Plant	Adj-Inv			C	3683	5100		S	859 1420
Ins Ultra Pure 25Kg	17270	31 Mantex	Adj-Inv			C	183	6740		S	859 1420
1A Mother Liquor	17300	4 Plant	Adj-Inv								
1A Hcl Mother Liquor	17310	4 Plant	Adj-Inv								
1A Chunks	17320	4 Plant	Adj-Inv								
Ultra Pure Samples	17340	4 Plant	Adj-Inv								
ICPI	40150	97 In Transit	Adj to Physical			C	157	5635		S	715 1460
Isophorone	40500	86 Waynesboro	Adj-Inv			C	151	6400		S	717 1460
Isophorone	40500	78 Pachuta	Adj-Inv			C	151	6400		S	717 1460
InvMax	40700	86 Odom-Waynesboro	Adj to Physical			C	164	5850		S	753 1460
Amul Emulsifier	40800	78 Odom-Pachuta	Adj to Physical			C	168	5675		S	720 1460
Amul Emulsifier	40800	86 Waynesboro	Adj to Physical			C	151	6400		S	720 1460
IM-2 Emulsifier	40910	4 Plant	Adj to Physical			C	151	6400		S	722 1460
Poly Solv	40920	4 Plant	Adj to Physical			C	151	6400		S	723 1460
Soda Ash	41050	4 Plant	Sold			C	151	6400		S	708 1460
Morwet	41480	86 Odom-Waynesboro	Adj to Physical			C	164	5850		S	726 1460
Polyton O	41470	86 Odom-Waynesboro	Adj to Physical			C	164	5850		S	727 1460
Glycerine	41480	86 Odom-Waynesboro	Adj to Physical		(1,419)	C	164	5850	638 55	S	728 1460 (638 55)
Ufonc	41490	86 Odom-Waynesboro	Adj to Physical			C	164	5850		S	729 1460
HSd 233	41500	10 B/H	Adj to Physical			C	164	5850		S	737 1460
elzan	41510	86 Odom-Waynesboro	Adj to Physical			C	164	5850		S	761 1460
ulfuric Acid	41520	4 Plant	Acidfluorfen used this raw material			C	182	5850		S	782 1460
0% Caustic	41530	4 Plant	Entered under wrong item #			C	151	6400		S	763 1460
ormaldehyde	41540	4 Plant	Used out of Vinnings Stock			S	8900	1230		S	764 1460
4 D-B Acid	41550	86 Odom-Waynesboro	Adj to Physical			C	410	7700		S	765 1460
ee gum	41570	86 Odom-Waynesboro	Adj to Physical			C	164	5850		S	731 1460
0% DMA	41580	57 HCC-Cordele	Adj to Physical			C	410	5700		S	766 1460
itric Acid	41590	86 Odom-Waynesboro	Adj to Physical			C	164	5850		S	767 1460
itric Acid	41590	57 HCC-Cordele	Adj to Physical			C	164	5850		S	767 1460
eperser	41600	86 Odom-Waynesboro	PO written under wrong item #		(200)	C	164	5850	254 00	S	740 1460 (254 00)
epwet	41610	10 B/H	PO written under wrong item #		200	C	164	5850	(496 00)	S	743 1460 496 00
ont'l Clay	41620	10 B/H	Adj to Physical			C	164	5850		S	748 1460
orphenine	41630	4 Plant	Adj-Water Treatment			C	151	6400		S	768 1460
arbaryl Tech	41670	86 Odom-Waynesboro	Adj to Physical			C	164	5850		S	757 1460
thephon	41680	21 Gray-Ashburn	Set Up Finish Good							S	791 1460

Adjustments to Inventory (Per physical; samples; etc.):

Product	Item No	Location	Type Adj	Cases/Drums	Gals/Lbs						
thephon	41680	78 Odom-Pachuta	Set Up Finish Good			C	187	5910	S	791	1460
thephon	41680	88 Odom-Waynesboro	Adj-Inv			C	198	5710	S	791	1460
oprophor	41690	86 Odom-Waynesboro	Adj-Inv		(61)	C	184	5850	114 07 S	809	1460
carcade	41750	86 Odom-Waynesboro	Adj-Inv		(152)	C	184	5850	380 00 S	827	1460
hums 30 plastic	42100	88 Odom-Waynesboro	Adj to Physical			C	184	5870	S	752	1460
hums 30 plastic	42100	4 Plant	Adj - Used for inhaling practice			C	184	5870	S	752	1460
hums 30 plastic	42100	10 B/H	Adj to Physical			C	184	5870	S	752	1460
5 m's	42210	4 Plant	Adj-Inv			C	1069	5890	S	738	1460
5 mt black	42300	78 Odom-Pachuta	Adj to Physical			C	1058	5890	S	742	1460
5 mt Crystal	42550	4 Plant	Adj-Inv			S	4	1230	S	756	1460
Aethanol	42640	4 Plant	Clean Out Tank			C	188	6400	S	735	1460
icL	42670	4 Plant	Adj-Inv			C	151	6400	S	758	1460
Atomethane	42680	4 Plant	Adj-Inv			C	183	5850	S	787	1460
taney Nickel	42690	4 Plant	Adj-Inv			C	183	5850	S	788	1460
iodium Hypo	42810	4 Plant	Sent to Ponds			C	151	6400	S	789	1460
hydromamine Sulfate	42850	4 Plant	Adj to Physical			C	151	6400	S	738	1460
ugs 1	44100	57 HCC-Cordate	Adj-Inv			C	430	5870	S	749	1460
ugs 2 S	44200	57 HCC-Cordate	Shipped per Stantey			C	184	5870	S	759	1460
ugs 2 S	44200	88 Odom-Waynesboro	Adj to Physical			C	184	5870	S	759	1460
ugs 2 S	44200	78 Odom-Pachuta	Adj to Physical			C	184	5870	S	759	1460
Antfoam AF 1500	45000	4 Plant	Transfer to Vinning Stock			S	8900	1230	S	770	1460
MPA	45020	4 Plant	Transfer to Vinning Stock			S	8900	1230	S	772	1460
MS	45030	4 Plant	Used out of Vignings Stock			S	8900	1230	S	773	1460
Metacure T-1	45040	4 Plant	Transfer to Cedar Stock			S	8900	1230	S	774	1460
0% Rayon Caustic	45080	4 Plant	Transfer to Cedar Stock			S	8900	1230	S	779	1460
0% Rayon Caustic	45090	4 Plant	Entered under wrong item #			C	151	6400	S	792	1460
0% Rayon Caustic	45090	4 Plant	Adj to Physical			C	151	6400	S	792	1460
Arquad	45100	88 Odom-Waynesboro	Adj to Physical			C	158	5850	S	781	1460
Arquar	45120	88 Odom-Waynesboro	Adj to Physical			C	158	5850	S	783	1460
argalite Blue	45130	88 Odom-Waynesboro	Adj to Physical			C	158	5850	S	784	1460
LC 1500 Antifoam	45140	86 Odom-Waynesboro	Samples			C	184	5850	S	785	1460
55 mt	45150	86 Odom-Waynesboro	Adj to Physical			C	1058	5890	S	786	1460
55 mt	45150	78 Odom-Pachuta	Adj to Physical			C	151	6400	S	788	1460
Butachlor	45200	88 Odom-Waynesboro	Adj to Physical		(53)	C	151	6400	124 55 S	794	1460
Butachlor	45200	78 Odom-Pachuta	Adj to Physical			C	151	6400	S	794	1460
Cane 5 gal m's	42000	4 Plant	Adj to Physical			C	151	6400	S	739	1460
Misc Activity:				Lbs/Gls							
Platinum Purchased											
Platinum	41040	97 In-Transit	Purchased								
Platinum	41040	97 In-Transit	Used		88						
OCPI Purchased											
OCPI	40150	97 In-Transit	Purchased R-P			S	715	1460	S	2	1590
OCB	41000	97 In-Transit	Used R-P			S	2	1590	S	703	1460
Duron Purchased											
Duron	3030	97 In-Transit	Purchased EMV			C	157	5910	S	3	1590
Duron	3030	97 In-Transit	Transfer to Inventory			S	816	1420	C	157	6740
DCA	3020	97 In-Transit	Used EMV			S	3	1590	S	701	1420
DCA Purchased											
DCA	3020	97 In-Transit	Purchased Beasterfid			C	153	5910	S	4	1590
DCA	3020	97 In-Transit	Purchased Rhone-Poulenc			C	153	5910	S	4	1590
DCA	3020	97 In-Transit	Transfer to Inventory			S	701	1420	C	153	6740
ODCB	41000	97 In-Transit	Used R-P			S	4	1590	S	703	1460
ODCB Purchased											
ODCB	41000	97 In-Transit									
Molinate Tech Purchased					44,874						
Molinate Tech	41760	97 In-Transit	Purchased EMV								

CEDAR - WEST HELENA
Production & Sales Units

11/30/1999

CC

C McGee
B ChristianJim Rone
File Copy

P Fields

	Item No	PRODUCE		Prod No	SOLD		Prod No	Year-To-Date Contracts				
		Drums	bags		Drums	bags						
CYMP	5110			73			580	30,198				
Acifluorfen 100% AI	5120		174,257	86		174,257	583	1,681,994				
RFG	5250			74			578	4,809,320				
PowerPhos	5150			72			589	109,030				
MC 5-Nitro	5290			70			580	106,241				
Atanol	5350		17,722	83		17,722	585	32,992				
IA	17000			87					C	3683	5100	100,758 75 S 837 1420
IA 25 Kg	17020											S 842 1420
Pure Tromethamine 25Kg	17120	371	20,450		485	26,733						S 843 1420 (100,758 75)
Pure Tromethamine 50Kg	17230											S 846 1420
Tromethamine Total						26,733	588		C	3681	5100	S 845 1420
Trometamol 25 Kg	17220											S 847 1420
Trometamol 50 Kg	17240											S 853 1420
Tns Ultra Pure 100 Kg	17250											
Pure Tns Hcl 100 Kg	17260											S 859 1420
Tns Ultra Pure 25Kg	17270											
Trometamol Total				85			581					
F Tech	3000		1,787,920	20			554		C	3054	5100	S 702 1420
UCA	3020		1,485,841	10		301,698	553		C	3053	5100	307,729 82 S 701 1420 (307,729 82)
Duron	3030					386,478			C	3057	5100	1,074,408 84 S 816 1420 (1,074,408 84)
Duron B Grade	3040											S 844 1420
Total Duron				11		386,478	557					
Duron Col 224 Kg	3070			12			558		C	3058	5100	S 848 1420
Flack Tech 25 Kg	3060	1,215	66,947		960	52,896			C	3055	5100	645,705 00 S 822 1420 (67,680 00)
Flaked Tech	3050		1,012,500	21		550,500						S 804 1420 (578,025 00)
Total Flake Tech						603,396	555					
3# 210L	10020								C	3067	5100	35,800 00 S 826 1420
3# bulk	3200		6,251	23								S 802 1420
3# 50 L	3180											S 854 1420
3# 20L	3220											S 819 1420
3# 200L	3250	120	6,341		100	5,284						S 807 1420 (35,800 00)
3# 55	3210											S 806 1420
3# Total						5,284	567					
Wham 2 x2 5	3180								C	3084	5100	S 832 1420
Wham 5	3260											S 808 1420
Wham 100L	3230											S 828 1420
Wham 30	3240											S 805 1420
Super Wham Bulk	3370											S 856 1420
Super Wham 2x2 5	3360											S 834 1420
Super Wham 30	3350											S 831 1420
Wham Sub-Total				25			584					
Duet 30	3430								C	3059	5100	S 823 1420
Duet Total				59			559					
Stam bulk	3400		161,833	32								S 811 1420
Stam 35	3420	3,645	127,575						C	3072	5100	S 813 1420
Stam Total							572					
4# bulk	3300			24					C	3069	5100	408,875.00 S 817 1420
4# 20 L	3280											S 812 1420
4# 55	3310											S 818 1420
4# 210 L	3320											S 838 1420
4# 200 L	3330											S 839 1420
4# 35	3340	446	15,610		1,500	52,500						S 814 1420 (408,875 00)
Prop 4# Domestic Sales						52,500	569					
Butoxone 175 4x1	15260								C	410	5100	S 410 1420
Butoxone 175 2x2 5	15240											
175 Total				51			591					
Butoxone 200 2x2 5	15540				576	2,880			C	430	5100	35,366 40 S 430 1420 (35,366 40)
Butoxone 200 4x1	15560											
200 Total				52		2,880	594					
Ethephon 100% AI	15740			90			595		C	3687	5100	S 851 1420
Butox 7500 10x2 33	15580				352	3,520	592		C	420	5100	48,048 00 S 850 1420 (48,048 00)
Butox 7500 Bulk	15590		47,702	53								
KWH						-191,535	101					
Total												

2,654,691 91

(2,654,691 91)

Fresh Goods Standards

Product	Item No	Unit	Per Unit	
Propanil Tech Bulk	3000	lbs	1 01	
PCA-Cedar	3020	lbs	1 02	
Thuron	3030	lbs	2 78	
Thuron B Grade	3040	lbs	2 78	
laked Tech	3050	lbs	1 05	
laked Tech 25Kg	3060	kg	2 82	
Thuron Col 224 Kg	3070	kg	4 10	
55% Blend	3100	lbs	1 01	
Wham DF (80%) 40s	3150	lbs		1 70
Wham EZ 2x2 5 Gal	3180	gts	7 38	
W 50 Liter	3190	Li	1 79	
Propanil 3s bulk	3200	gts	6 11	
Propanil 3s 55 gal	3210	gts	6 79	
Propanil 3s 20L	3220	Li	1 79	
Wham 100 Liter	3230	Li	1 85	
Wham 30 gal	3240	gts	7 38	
Propanil 3s 200L	3250	Li	1 79	
Wham 5 gal	3260	gts	7 38	
Wham 80% 50s	3270	lbs		1 70
Propanil 4s 20L	3290	Li	2 05	
Propanil 4s Bulk	3300	gts	6 99	
Propanil 4s 55 gal	3310	gts	7 75	
Propanil 4s 210 L	3320	Li	2 05	
Propanil 4s 200L	3330	Li	2 05	
Propanil 4s 35 gal	3340	gts	7 75	
Super Wham 30 gal	3350	gts	7 38	
Super Wham 2x2 5 Gal	3360	gts	7 38	
Super Wham Bulk	3370	gts	6 86	
Slam Bulk	3400	gts	7 31	
Slam 35 gal	3420	gts	7 80	
Duet	3430	gts	7 33	
Insemano Alcohol	5340	lbs	3 77	
Propanil 380 210 L	10020	Li	1 79	
Butox 200 Bulk	15200	gts	10 25	
Butox 175	15240/15260	gts	10 80	
Butox 200	5530/15540/1556	gts	12 28	
Butozone 7500 DF	15580	Bag	13 65	
Butozone 7500 DF	15590	Bulk	1 85	
Ethephon	15740	lbs	1 24	
Fromethamine Bulk	17000	lbs	3 77	
Tham 25 Kg	17020	kg	8 31	3 77 lb
Pure Fromethamine 25 Kg	17120	kg	8 31	3 77 lb
Fromethamol 25 Kg	17220	kg	18 50	8 39 lb
Pure Fromethamine 50 Kg	17230	kg	8 31	3 77 lb
Fromethamol 50 Kg	17240	kg	18 50	8 39 lb
Fris Ultra Pure 100 Kg	17250	kg	18 12	8 22 lb
Pure Trs-Hcl 100 Kg	17260	kg	18 12	8 22 lb
Frs Ultra Pure 25 Kg	17270	kg	23 04	10 45 lb

R/Ms Standard

Product	Item No	Unit	Per Unit
DCA	40100	lbs	1 05
DCPi	40150	lbs	2 36
P Acid	40200	lbs	24
P Anhydr	40300	lbs	92
MO	40400	lbs	59
Isophor	40500	lbs	58
Enul	40600	lbs	70
Lowfax 3B2	40700	lbs	7 52
Fenn 500	40800	lbs	15
Armul	40900	lbs	76
TM-2 Emulsifier	40910	lbs	1 65
PolySolv	40920	lbs	71
MCPA-IOE	40930	lbs	1 78
ODCB	41000	lbs	37
Sulfuric Acid	41010	lbs	04
Nitric Acid	41020	lbs	18
Hydrogen	41030	lbs	1 20

R/M's Standard			
Product	Item No	Unit	Per Unit
Platinum	41040	tr oza	393 00
Roda Ash	41050	lbs	13
R/M's Standard			
Product	Item No	Unit	Per Unit
Lime	41060	lbs	07
Plat Cat	41070	lbs	86 00
Isoph/Mibk	41080	lbs	52
Hydrogen Peroxide	41090	lbs	23
Xylene (Cedar)	41200	lbs	19
Mibk	41300	lbs	47
Vangel	41450	lbs	1 37
Morewet	41460	lbs	1 08
Polyfon	41470	lbs	62
Glycer	41480	lbs	45
Alfonac	41490	lbs	78
H Si	41500	lbs	83
Ketzan	41510	lbs	5 30
Sulfuric Acid 93%	41520	lbs	04
Caustic 50%	41530	lbs	06
Formaldehyde	41540	lbs	11
2,4 D-B Acid	41550	lbs	2 00
Carbon Bisulfide	41560	lbs	28
Veegum	41570	lbs	1 85
60% DMA	41580	lbs	60
Citric Acid	41590	lbs	92
Step-seperse DF 200	41600	lbs	1 27
Stepwet DF 95	41610	lbs	2 48
Continental Clay	41620	lbs	06
Morpholine	41630	lbs	1 06
Sun 7N Oil	41640	lbs	16
Anhydrous DMA	41650	lbs	64
High Ounty Heptane	41660	lbs	21
Technical Carbyl	41670	lbs	3 75
Thephon	41680	lbs	3 37
Isoprophor 4d384	41690	lbs	1 87
Mixed Nitrating Acid	41700	lbs	11
Acetic Anhydride	41710	lbs	38
Ethylene Dichloride	41720	lbs	22
Proxel GXL	41730	lbs	5 12
Perdone D	41740	lbs	33
Ucaroxide	41750	lbs	2 50
5 gal/20 L Pis	42000	ea	3 95
10 Mts	42100	ea	15 85
Stam 35	42200	ea	17 90
35 m's	42210	ea	19 50
35 m's Plastic/Stam	42220	ea	15 00
35 m's Plastic/Prop	42230	ea	15 00
55 m's	42300	ea	22 05
55 m's Plastic	42500	ea	22 50
55 m's Crystal Litho	42550	ea	21 60
MITPO Drums	42600	ea	25 55
Sodium Hypo	42610	lbs	08
Caustic 30%	42620	lbs	07
Methal Mercaptan	42630	lbs	78
Methanol 99%	42640	lbs	07
Hydroxamine Sulfate	42650	lbs	1 00
Caustic 17%	42660	lbs	03
Hydrochloric Acid	42670	lbs	05
Nitromethane 99 5%	42680	lbs	1 38
Nickel Catalyst	42690	lbs	7 83
DMA 40% Solution	42700	lbs	47
Unpacks	44000	ea	2 68
Jugs-1 Gal Plastic	44100	ea	43
Jugs-2 5 Gal Plastic	44200	ea	1 36
Antifoam AF 9000	45000	lbs	9 60
Acetone	45010	lbs	35
Dimethylolpropionic	45020	lbs	2 63
Glycerol Monostearate	45030	lbs	71

Product	Item No	Unit	Per Unit
Acetacure T-1 Catalyst	45040	lbs	12.28
Aethyldethanolamine	45050	lbs	2.15
Arroxel GXL Brocade	45060	lbs	5.20
Isourene Diisocyanate	45070	lbs	1.33
0% Rayon Grade Caustic	45080	lbs	11
0% Caustic	45090	lbs	08 (Old Rayon Grade)
Arquad 18/29	45100	lbs	1.15
Arquar 2C75	45120	lbs	1.85
Argalite Blue dye	45130	lbs	13.55
IC 1500 Antifoam	45140	lbs	6.30
Arum 55 gal Daron Col	45150	ea	44.95
Butachlor	45200	lbs	2.35
Sodium Cyanide	45300	lbs	90
TEAB	45310	lbs	3.90
Ienneco 500/100	45320	lbs	18
38% Hol	45330	lbs	10
Toluene	45340	lbs	15
Rock Salt	45350	lbs	19
Thionyl Chloride	45360	lbs	0.70
OMF	45370	lbs	0.95
Granular Salt	45380	lbs	0.12
55 mt Drums (Cyper)	45390	lbs	29.50
2-4 DB Acid 85%	46000	kg	2.55
Metsulfuron Methyl 80%	46010	kg	118.50
Acido Propionico Puro	46020	kg	1.27
Acido Propionico Usado	46030	kg	1.27
Diclorodanilina 98%	46040	kg	3.00
Propantl Tech	46050	kg	3.08
Arston 34	46060	kg	2.26
Arston 180	46070	kg	2.46
Acete Banano	46080	kg	0.11
Oxido Mestilco	46090	kg	2.08
Tolueno	46100	kg	0.79
Anhydrous Hydr Chloride	46200	lbs	0.70
Ethylene Oxide	46210	lbs	0.42
Phosphorus Trichloride	46220	lbs	0.42



facsimile transmittal

To: Chris McGee

Fax: 9-1-870-3795

From: Geoff Pratt

Date: 12/16/99

Re: MOU Cyclanilide

Pages: 7

Phone: 901-684-5373

Cc: David Guffey Joe Mancini

Jim Rone

Randal Tomblin

Ron Fowler

☐ Urgent☐ For Review☐ Please Comment☐ Please Reply☐ Please Recycle

Dear Chris,

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Regards,

Geoff Pratt

CC: Jim A.
David G.
Kevin P.
Larry M.
Mike R.
Neil R.

Cedar Chemical Corporation

LAW OFFICES

APPERSON, CRUMP & MAXWELL, PLC

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ONE COMMERCE SQUARE

MEMPHIS, TENNESSEE 38105-2318

801 / 525-1711

FACSIMILE 801 / 521-0788

December 10, 1999

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SUITE 100

1785 KIRBY PARKWAY

MEMPHIS, TENNESSEE 38130-4576

801 / 756-6300

FACSIMILE 801 / 757-1296

CHARLES W. METCALF 1840-1924

WILLIAM R. METCALF 1872-1940

JOHN W. APPERSON, 1896-1968

OF COUNSEL

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YESSER & CANTRELL

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JOHN B. MAXWELL, JR.
ALLEN Y. MALONE
PHILIP G. KAMINSKY
ROBERT L. DINKELSPIEL
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RICHARD J. MYERS
THOMAS M. TWIBEL
ALLISON M. TWIBEL

*ALSO ADMITTED IN MISSISSIPPI

**ALSO ADMITTED IN DISTRICT OF COLUMBIA

Mr. Geoffrey L. Pratt
Vice President
Cedar Chemical Corporation
24th Floor, Clark Tower
5100 Poplar Avenue
Memphis, TN 38137

VIA VIP

Re: Memorandum of Understanding with Rhone-Poulenc/Cyclamillide

Dear Geoff:

As you requested yesterday, I am hand delivering the referenced Agreement to your Cedar office so that Melissa can fax it to Rhone-Poulenc. I am faxing this letter and the new draft to the West Helena Plant to your attention so that you will have an opportunity to look it over before it is sent to Rhone-Poulenc. We never discussed the deadlines in Paragraph 3 of the MOU other than the initial deadline of February 1, 2000. Accordingly, I inserted the remaining three deadlines arbitrarily - March 1 for agreement on the Capital Improvements, Product and Raw Material specifications and cost schedule; April 1 for Rhone-Poulenc's preparation and delivery of the proposed Definitive Agreement; and May 1 for completing negotiation and execution of the Definitive Agreement. Does this work?

Sincerely yours,


Allen T. Malone

ATM:cs

Enclosure

cc: West Helena Plant (via fax)

MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING is made and entered into as of the date last below written, by and between

Cedar Chemical Corporation, a Delaware corporation, having its principal place of business at Suite 2414 Clark Tower, 5100 Poplar Avenue, Memphis, Tennessee 38137 (hereinafter referred to as "CEDAR"),

and

Rhône-Poulenc Agro Matières Actives, a French "société en nom collectif" having its registered office at 14/20, rue Pierre Balzet -69009 LYON-France (hereinafter referred to as "Rhône-Poulenc,"

Witnesseth:

- WHEREAS, Rhône-Poulenc desires to retain an independent third party contractor to toll manufacture for it Cyclanilide, also known as CS-DCA (1-(2,4-dichlorophenyliminocarbonyl)-cyclopropane carboxylic acid) (hereinafter "Product") from 2,4 DCA (2,4 Dichloro aniline) (hereinafter "DCA") and (cyclopropane- 1,1-dicarboxylic acid dimethyl ether (CPDM) (hereinafter "CPDM"), DCA and CPDM together with Sodium Methoxide (hereinafter "NaMO") being sometimes referred collectively herein as the "Raw Materials"; and
- WHEREAS, CEDAR owns and operates a chemical manufacturing facility located at West Helena, Arkansas which, following installation of certain capital improvements and equipment estimated to cost approximately \$750,000 (the "Capital Improvements"), is deemed capable of producing Product from DCA and CPDM utilizing Rhône-Poulenc's manufacturing process (the "Process") disclosed by Rhône-Poulenc to Cedar pursuant to a Secrecy Agreement between Rhône-Poulenc and Cedar dated as of May 14, 1999 (the "Secrecy Agreement"); and
- WHEREAS, it is agreed that CEDAR and Rhône-Poulenc shall promptly commence negotiations with each other in good faith with the intent of reaching a definitive agreement (the "Definitive Agreement") satisfactory in form and substance to their respective managements and incorporating the terms and principles set forth herein.

NOW, THEREFORE, in consideration of the premises and the terms and conditions herein contained, the Parties agree as follows:

1. **Purpose.** The purpose of this Memorandum of Understanding is to set forth the terms and principles under which the parties shall negotiate and enter into the Definitive Agreement referred to hereinabove with respect to the toll manufacturing and supply agreement between Cedar and Rhone-Poulenc under which Cedar shall produce Product for Rhone-Poulenc, and under which Cedar shall initiate engineering studies and make equipment purchase commitments to enable it to construct and complete the Capital Improvements in time to begin producing Product for Rhone-Poulenc in the fourth quarter of the year 2000 in the quantities and in accordance with the terms and conditions set forth herein.

2. **Definitive Agreement.** The Definitive Agreement which the parties intend to execute shall include among other terms, the following provisions:

A. **Term.** The initial term shall be from the date of execution of the Definitive Agreement through June 30, 2003, consisting of three (3) contract years (the "Contract Years"). The first Contract Year shall be from the effective date of the Definitive Agreement through June 30, 2001, and the last Contract Year of the initial term shall be for the period July 1, 2002 through June 30, 2003. Thereafter, the term of the Definitive Agreement shall be renewed from year to year unless terminated by either party upon notice to the other not less than one (1) year prior to the end of the initial term or one year prior to the end of any extension of the initial term of Definitive Agreement.

B. **Raw Materials.** Rhone-Poulenc shall be responsible for supplying Cedar, at its cost, the Raw Materials in sufficient quantities to enable Cedar to produce, in continuous campaigns, all quantities of Product ordered by Rhone-Poulenc, provided that in the event Cedar is able to obtain a more favorable price than Rhone-Poulenc for purchase of NaMO, Cedar shall purchase such quantities of NaMO as shall be required for it to perform hereunder, but for the account of Rhone-Poulenc. Cedar shall supply, at its cost, all raw materials other than the Raw Materials and Rhone-Poulenc shall reimburse Cedar its actual cost for the purchase of such raw material within thirty (30) days following the date of Cedar's invoice.

C. **Product.** Rhone-Poulenc shall order and Cedar shall produce from Raw Materials supplied by Rhone-Poulenc not less than four hundred twenty (420) metric tons of Product during the initial term of this Agreement. Not less than eighty (80) metric tons of Product shall be produced by Cedar for Rhone-Poulenc in the first Contract Year, commencing in the fourth quarter of the year 2000; not less than one hundred sixty (160) metric tons shall be ordered by Rhone-Poulenc and produced by Cedar during the second Contract Year; and not less than one hundred eighty (180)

metric tons shall be ordered by Rhone-Poulenc and produced by Cedar in the third Contract Year, and in each subsequent Contract Year.

D. Scheduling. Rhone-Poulenc shall submit its orders for Product to be produced by Cedar in each calendar year during the term hereof by no later than July 1 of the previous Contract Year, provided that its firm order for Product to be produced by Cedar in the first Contract Year shall be set forth in the Definitive Agreement.

E. Raw Material Usage. Maximum usage factors applicable to consumption of Raw Materials (expressed in kilograms of Raw Materials consumed per kilogram of Product) shall be determined based on actual results achieved during the production of the initial eighty metric tons of Product during the initial campaign. Thereafter, to the extent that any over-consumption of Raw Materials (+ 3.5%) shall be for Cedar's account. The savings on any under-consumption of Raw Materials shall be shared equally by the parties.

F. Capital Improvements. Cedar's cost of Capital Improvements shall be amortized over the minimum four hundred twenty (420) metric tons of Product to be produced by Cedar and paid for by Rhone-Poulenc during the initial term of the Definitive Agreement. For example, if the agreed cost of the Capital Improvements for which Rhone-Poulenc shall be responsible is \$750,000.00, any shortfall in the minimum quantity of Product produced by Cedar and paid for by Rhone-Poulenc in any Contract Year during the initial term of the Definitive Agreement shall require that Rhone-Poulenc pay to Cedar within thirty (30) days following the last day of such Contract Year that number of kilograms of Product produced by Cedar during such Contract Year less than the minimum quantity specified for such Contract Year at \$1.79 per kilogram.

G. Startup. Rhone-Poulenc shall provide reasonable technical assistance to Cedar during startup of the initial campaign.

H. Waste Disposal. The parties shall cooperate to determine the most cost effective and environmentally sound method to dispose of wastes generated by production of Product. Costs of waste disposal shall be for Rhone-Poulenc's account.

I. Toll Fees. Cedar's toll manufacturing fees for production of Product for Rhone-Poulenc during the initial term shall be \$8.00 per kilogram for all Product produced in the year 2000; \$7.00 per kilogram for Product ordered by Rhone-Poulenc for production by Cedar in a continuous campaign of at least one hundred fifty (150) metric tons in each subsequent calendar year; and \$6.50 per kilogram for any continuous production campaign of more than two hundred (200) metric tons in a single year. The parties shall agree on an escalation formula by which the fees may

be adjusted annually to reflect increases in manufacturing costs. Cedar shall invoice Rhone-Poulenc at the end of each month during the term of the Definitive Agreement for all quantities of Product produced thereunder, at the applicable toll manufacturing fee, and for all raw materials (including NaMO) purchased by Cedar hereunder. Such invoices shall be due and payable by Rhone-Poulenc thirty (30) days from date of invoice.

J. Miscellaneous. The Definitive Agreement shall contain additional terms and provisions normally contained in agreements of this nature.

3. Schedule of Target Dates.

A. On or before ~~February 1~~, ^{March 31,} 2000, Cedar shall submit to Rhone-Poulenc detailed engineering drawings describing the Capital Improvements, and its final estimated cost to install the Capital Improvements and Rhone-Poulenc shall have delivered to Cedar its detailed specifications for Product and Raw Materials.

B. On or before ~~March 1~~, ^{April 30 May 1st} 2000, the parties shall have reached final agreement concerning the documents describing the Capital Improvements, including the agreed cost of same to be amortized over the initial term of Definitive Agreement. The parties shall have also reached written agreement as to the Product and Raw Material specifications. Such documents shall be used as Exhibits to the Definitive Agreement. The Capital Improvements documents shall include a schedule of the costs incurred and to be incurred by Cedar while negotiation of the Definitive Agreement is pending. All such costs and contractual commitments incurred by Cedar as set out in such schedule of costs shall be for Rhone-Poulenc's account, either for amortization and reimbursement in accordance with the provisions of Paragraph 2F hereinabove, or, alternatively, in the event that, following good faith negotiations, either party determines that it cannot reach agreement with the other party on the terms of the Definitive Agreement, or, in any event, if the Definitive Agreement is not executed by the parties on or before May 1, 2000, or, if the Definitive Agreement is executed by the parties, but is subsequently terminated for reasons other than for default by Cedar prior to the end of the initial term, such costs (to the extent incurred by Cedar and unamortized) shall be paid in full by Rhone-Poulenc to Cedar upon the occurrence of any such event.

C. On or before ~~April 1~~, ^{March} 2000, Rhone-Poulenc shall prepare and deliver to Cedar a proposed first draft of the Definitive Agreement.

D. On or before May 1, 2000, the parties shall obtain final approval of their respective managements and execute the Definitive Agreement.

4. **Binding Agreement.** The provisions of this Memorandum of Understanding are binding upon the parties in accordance with the terms hereof; provided, however, the parties shall be bound by the terms of the proposed toll manufacturing agreement between Cedar and Rhone-Poulenc subject to, and only in accordance with the terms of, the Definitive Agreement contemplated hereby, when as approved by the parties' respective managements.

Executed by the parties, acting by and through their authorized representatives, as of the dates appearing below.

CEDAR CHEMICAL CORPORATION

By: _____

Date: _____

RHÔNE-POULENC AGRO MATIÈRES ACTIVES

By: _____

Date: _____



facsimile transmittal

To: [REDACTED] Fax: 9-1-870-3795
From: Geoff Pratt Date: 12/16/99
Re: MOU Cyclanilide Pages: 7
Phone: 901-684-5373
cc: David Guffey Joe Mancini
Jim Rone Randal Tomblin
Ron Fowler

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

Dear Chris,

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Regards

Geoff Pratt

Cedar Chemical Corporation
5100 Poplar Avenue, Ste 2414
Memphis, TN 38137
901-684-5371

AB0000087991

LAW OFFICES
APPERSON, CRUMP & MAXWELL, PLC

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FACSIMILE 901 / 521-0789

December 10, 1999

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CHARLES W. METCALF, 1840-1824
WILLIAM R. METCALF, 1872-1848
JOHN W. APPERSON, 1896-1885

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*ALSO ADMITTED IN MISSISSIPPI
**ALSO ADMITTED IN DISTRICT OF COLUMBIA

Mr. Geoffrey L. Pratt
Vice President
Cedar Chemical Corporation
24th Floor, Clark Tower
5100 Poplar Avenue
Memphis, TN 38137

VIA VIP

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ATM:cs
Enclosure
cc: West Helena Plant (via fax)

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and

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Witnesseth:

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NOW, THEREFORE, in consideration of the premises and the terms and conditions herein contained, the Parties agree as follows:

1. **Purpose.** The purpose of this Memorandum of Understanding is to set forth the terms and principles under which the parties shall negotiate and enter into the Definitive Agreement referred to hereinabove with respect to the toll manufacturing and supply agreement between Cedar and Rhone-Poulenc under which Cedar shall produce Product for Rhone-Poulenc, and under which Cedar shall initiate engineering studies and make equipment purchase commitments to enable it to construct and complete the Capital Improvements in time to begin producing Product for Rhone-Poulenc in the fourth quarter of the year 2000 in the quantities and in accordance with the terms and conditions set forth herein.

2. **Definitive Agreement.** The Definitive Agreement which the parties intend to execute shall include among other terms, the following provisions:

A. **Term.** The initial term shall be from the date of execution of the Definitive Agreement through June 30, 2003, consisting of three (3) contract years (the "Contract Years"). The first Contract Year shall be from the effective date of the Definitive Agreement through June 30, 2001, and the last Contract Year of the initial term shall be for the period July 1, 2002 through June 30, 2003. Thereafter, the term of the Definitive Agreement shall be renewed from year to year unless terminated by either party upon notice to the other not less than one (1) year prior to the end of the initial term or one year prior to the end of any extension of the initial term of Definitive Agreement.

B. **Raw Materials.** Rhone-Poulenc shall be responsible for supplying Cedar, at its cost, the Raw Materials in sufficient quantities to enable Cedar to produce, in continuous campaigns, all quantities of Product ordered by Rhone-Poulenc, provided that in the event Cedar is able to obtain a more favorable price than Rhone-Poulenc for purchase of NaMO, Cedar shall purchase such quantities of NaMO as shall be required for it to perform hereunder, but for the account of Rhone-Poulenc. Cedar shall supply, at its cost, all raw materials other than the Raw Materials and Rhone-Poulenc shall reimburse Cedar its actual cost for the purchase of such raw material within thirty (30) days following the date of Cedar's invoice.

C. **Product.** Rhone-Poulenc shall order and Cedar shall produce from Raw Materials supplied by Rhone-Poulenc not less than four hundred twenty (420) metric tons of Product during the initial term of this Agreement. Not less than eighty (80) metric tons of Product shall be produced by Cedar for Rhone-Poulenc in the first Contract Year, commencing in the fourth quarter of the year 2000; not less than one hundred sixty (160) metric tons shall be ordered by Rhone-Poulenc and produced by Cedar during the second Contract Year; and not less than one hundred eighty (180)

metric tons shall be ordered by Rhone-Poulenc and produced by Cedar in the third Contract Year, and in each subsequent Contract Year.

D. Scheduling. Rhone-Poulenc shall submit its orders for Product to be produced by Cedar in each calendar year during the term hereof by no later than July 1 of the previous Contract Year, provided that its firm order for Product to be produced by Cedar in the first Contract Year shall be set forth in the Definitive Agreement.

E. Raw Material Usage. Maximum usage factors applicable to consumption of Raw Materials (expressed in kilograms of Raw Materials consumed per kilogram of Product) shall be determined based on actual results achieved during the production of the initial eighty metric tons of Product during the initial campaign. Thereafter, to the extent that any over-consumption of Raw Materials (+ 3.5%) shall be for Cedar's account. The savings on any under-consumption of Raw Materials shall be shared equally by the parties.

F. Capital Improvements. Cedar's cost of Capital Improvements shall be amortized over the minimum four hundred twenty (420) metric tons of Product to be produced by Cedar and paid for by Rhone-Poulenc during the initial term of the Definitive Agreement. For example, if the agreed cost of the Capital Improvements for which Rhone-Poulenc shall be responsible is \$750,000.00, any shortfall in the minimum quantity of Product produced by Cedar and paid for by Rhone-Poulenc in any Contract Year during the initial term of the Definitive Agreement shall require that Rhone-Poulenc pay to Cedar within thirty (30) days following the last day of such Contract Year that number of kilograms of Product produced by Cedar during such Contract Year less than the minimum quantity specified for such Contract Year at \$1.79 per kilogram.

G. Startup. Rhone-Poulenc shall provide reasonable technical assistance to Cedar during startup of the initial campaign.

H. Waste Disposal. The parties shall cooperate to determine the most cost effective and environmentally sound method to dispose of wastes generated by production of Product. Costs of waste disposal shall be for Rhone-Poulenc's account.

I. Toll Fees. Cedar's toll manufacturing fees for production of Product for Rhone-Poulenc during the initial term shall be \$8.00 per kilogram for all Product produced in the year 2000; \$7.00 per kilogram for Product ordered by Rhone-Poulenc for production by Cedar in a continuous campaign of at least one hundred fifty (150) metric tons in each subsequent calendar year; and \$6.50 per kilogram for any continuous production campaign of more than two hundred (200) metric tons in a single year. The parties shall agree on an escalation formula by which the fees may

be adjusted annually to reflect increases in manufacturing costs. Cedar shall invoice Rhone-Poulenc at the end of each month during the term of the Definitive Agreement for all quantities of Product produced thereunder, at the applicable toll manufacturing fee, and for all raw materials (including NaMO) purchased by Cedar hereunder. Such invoices shall be due and payable by Rhone-Poulenc thirty (30) days from date of invoice.

J. Miscellaneous. The Definitive Agreement shall contain additional terms and provisions normally contained in agreements of this nature.

3. Schedule of Target Dates.

A. On or before ^{March 31,} ~~February 1,~~ 2000, Cedar shall submit to Rhone-Poulenc detailed engineering drawings describing the Capital Improvements, and its final estimated cost to install the Capital Improvements and Rhone-Poulenc shall have delivered to Cedar its detailed specifications for Product and Raw Materials.

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B. On or before March ~~X~~, 2000, the parties shall have reached final agreement concerning the documents describing the Capital Improvements, including the agreed cost of same to be amortized over the initial term of Definitive Agreement. The parties shall have also reached written agreement as to the Product and Raw Material specifications. Such documents shall be used as Exhibits to the Definitive Agreement. The Capital Improvements documents shall include a schedule of the costs incurred and to be incurred by Cedar while negotiation of the Definitive Agreement is pending. All such costs and contractual commitments incurred by Cedar as set out in such schedule of costs shall be for Rhone-Poulenc's account, either for amortization and reimbursement in accordance with the provisions of Paragraph 2F hereinabove, or, alternatively, in the event that, following good faith negotiations, either party determines that it cannot reach agreement with the other party on the terms of the Definitive Agreement, or, in any event, if the Definitive Agreement is not executed by the parties on or before May 1, 2000, or, if the Definitive Agreement is executed by the parties, but is subsequently terminated for reasons other than for default by Cedar prior to the end of the initial term, such costs (to the extent incurred by Cedar and unamortized) shall be paid in full by Rhone-Poulenc to Cedar upon the occurrence of any such event.

C. On or before ^{March} ~~April~~ 1, 2000, Rhone-Poulenc shall prepare and deliver to Cedar a proposed first draft of the Definitive Agreement.

D. On or before May 1, 2000, the parties shall obtain final approval of their respective managements and execute the Definitive Agreement.

4. **Binding Agreement.** The provisions of this Memorandum of Understanding are binding upon the parties in accordance with the terms hereof; provided, however, the parties shall be bound by the terms of the proposed toll manufacturing agreement between Cedar and Rhone-Poulenc subject to, and only in accordance with the terms of, the Definitive Agreement contemplated hereby, when as approved by the parties' respective managements.

Executed by the parties, acting by and through their authorized representatives, as of the dates appearing below.

CEDAR CHEMICAL CORPORATION

By: _____

Date: _____

RHÔNE-POULENC AGRO MATIÈRES ACTIVES

By: _____

Date: _____



Approved: James H. Rone
Signature

Internal Correspondence

To: Attendees (Distribution)
CC: ✓ C. McGee
From: David C. Guffey
Date: 16 December 1999
RE: Meeting minutes—Cyclanilide Technical Review 15 December 1999
Attachments: (a) Preliminary Schedule, (b) Action Items, (c) DRAFT Final Product Specification

The meeting opened with a general discussion of the intent of the technical review and the desire to answer all questions possible in order to move forward with a detailed plant design for Cyclanilide. Pierre LaRoy (RP) described the relationship of the Rhone-Poulenc process and the Degussa-Huls plant operation: the Degussa plant was an existing facility and was not designed specifically for Cyclanilide. RP developed Cyclanilide, Degussa improved/changed the process and now licenses the process back to RP.

Discussion began regarding timing of the project. The preliminary project schedule was then developed (attached). Serge Ravet noted that 80-100 metric tons are required by the end of the year 2000.

Dr. A. Dinculescu discussed the process chemistry and brought out potential improvements to the process (see Action Items 1-3, attached). While noting the differences in the RP and Degussa processes, P. LaRoy noted that during the hydrolysis step, the RP process adds NaOH to ensure completion of the reaction—temperature control must be maintained to avoid degradation products. Additionally, after the CPDM addition in the Coupling step, agitation is crucial as the sodium salt precipitates out of solution.

P. LaRoy indicated that the twenty (20) theoretical stages for distillation listed in the Degussa-Huls technical package are simply what was available. The required stages for separation are on the order of six (6) to eight (8) stages in the column. A safe maximum is ten (10) stages in the column.

S. Ravet distributed "DRAFT" copies of the final product specification (attached).

D. Guffey presented time cycle estimate and preliminary engineering flow diagrams (EFD). Several discussion points were brought out during the presentation and noted on the copies of the diagrams:

- a. NaMethoxide charge time should be shortened from the estimated eight (8) hours to three (3) hours.
- b. Coupling column should contain 8-10 theo. stages.
- c. Coupling reactor should not be glass lined steel—potential basic conditions resulting in corrosion. [RP Merit Note, ¶ 5.1.3 suggests glass lined reactor]
- d. Coupling reactor may need new agitator design.

- e. No product should be left behind after transfer from Coupling reactor—yield loss and potential quality issue.
- f. Coupling product can be washed from the system and made more flowable by water addition. Consider adding the water for the hydrolysis in the Coupling reactor and transferring to the Hydrolysis reactor.
- g. Consider addition of a hold tank for the aqueous phase from Hydrolysis.
- h. Consider transferring the aqueous phase from hydrolysis and completing the acidification in the Centrifuge Feed Tank.
- i. Toluene recovery column should contain 6-8 theo. stages.
- j. May need a water wash of the Toluene recovery overheads to remove MeOH.

Distribution

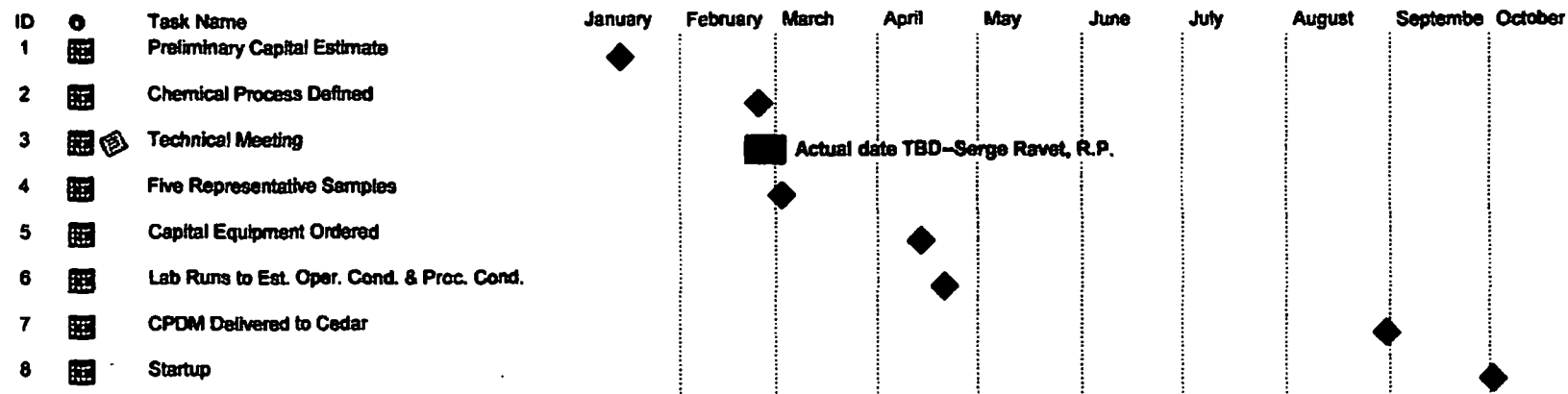
Cedar Chemical Corp.

A. Dinculescu
W. Gastrock
S. Hale
J. Mancini via fax
G. Pratt via fax
J. Rone

Rhone-Poulenc Agro

Pierre LaRoy via fax 33-4-72-85-20-66
Serge Ravet via fax 33-4-72-85-20-58

Rhone-Poulenc Cyclanilide RPA 90946 Preliminary Schedule



Rhone-Poulenc RPA 90946 (Cyclanilide)

Action Items

Meeting Date: 15-Dec-99

Attending:	<u>Cedar Chemical</u>	<u>Rhone-Poulenc</u>
	A. Dinculescu	P. LaRoy
	W. Gastrock	S. Ravet
	D. Guffey	
	S. Hale	
	J. Mancini	
	G. Pratt	
	J. Rone	

Action Item No.	Action Item	Person(s) Responsible	Target Date
15D99-01	Test Xylene v. Toluene for reaction solvent	A.D. & P.L.	14-Jan-00
15D99-02	Test Formic Acid v. Sulfuric Acid as Acidification agent	A.D. & P.L.	14-Jan-00
15D99-03	Test KOH v. Sodium Methoxide as Coupling reagent	A.D. & P.L.	14-Jan-00
15D99-04	Test R.P. v. DeGussa-Huls Coupling & Hydrolysis procedures	A.D. & P.L.	04-Feb-00
15D99-05	Finalize operating conditions & generate final material balance	A.D. & P.L.	25-Feb-00
15D99-06	Generate five (5) representative samples for Series 61/62	A.D. & P.L.	TBD by RP*
15D99-07	Ship S.61/62 samples to Frankfurt	A.D. & P.L.	TBD by RP
15D99-08	Analysis of S.61/62 samples	P.L.	TBD by RP
15D99-09	Generate Series 61/62 documentation	Rhone-Poulenc	TBD by RP
15D99-10	File Series 61/62 documentation	Rhone-Poulenc	TBD by RP
15D99-11	Agitator design for service (viscous)	P.L.	25-Feb-00
15D99-12	Corrosion concerns of Coupling reaction for glass lined steel	P.L.	04-Jan-00
15D99-13	Safety dossier w/industrial hygiene, ST classification, etc.	P.L.	17-Mar-00
15D99-14	Safety review	D.G. & P.L.	07-Apr-00
15D99-15	Waste Streams—Composition & Disposition	P.L.	04-Feb-00
15D99-16	Technical info regarding Dryer transmitted to P.L.	D.G.	04-Feb-00
15D99-17	Technical details of toluene recovery from phase split to D.G.	P.L.	18-Feb-00
15D99-18	Aqueous waste recovery design	D.G. & P.L.	18-Feb-00
15D99-19	TOSCA status of all raw materials	S.R. & G.P.	04-Jan-00

* TBD: To Be Determined

4. ANALYTICAL SPECIFICATIONS

Determinations	Methods of analysis		Specifications (g/kg)		Frequency
	Reference	Routine	Manufacturing	Commercial standard	
• Appearance	Visual	Visual	White powder	White powder	each batch
• CYCLANILIDE content	C.817.06.95	C.817.06.95	960 min.	960 min.	each batch
• Water	CIPAC MT 30.1	CIPAC MT 30.1	5 max.	5 max.	each batch
• Toluene	C.816.06.95	C.816.06.95	1 max.		each batch
• Process Impurities					
- RPA 116741 (imp. A)	C.821.07.95	C.821.07.95	3 max.		each batch
- 2, 4 dichloroaniline	C.821.07.95	C.821.07.95	1 max.		each batch
- RPA 090945	C.821.07.95	C.821.07.95	10 max.		each batch
- RPA 111030	C.821.07.95	C.821.07.95	10 max.		each batch
- RPA 114924	C.821.07.95	C.821.07.95	15 max.		each batch
- RPA 093903	C.821.07.95	C.821.07.95	0.1 max.		each batch
- RPA 090899	C.821.07.95	C.821.07.95	1 max.		each batch



Internal Correspondence

To: Peter Fields
CC: C. McGee, J. Rone
From: David C. Guffey
Date: 17 December 1999
RE: Cyclanilide 90946 Project—Projected Waste Costs **REVISED**

Please be advised that we are currently investigating a new project for Rhone-Poulenc Agro, Cyclanilide 90946, with a projected startup of mid next year. Following are the preliminary worst-case waste figures based on a 15 hour cycle time with a 3,900 lb/batch (2Trains) payload:

Organic Waste:

<u>Component</u>	<u>Daily Prod'n (lb/day)</u>	<u>% of Stream</u>	<u>Est. Volume (gal/day)</u>
Water	16.6	0.3	2.0
Toluene	1,917.8	33.2	264.6
Methanol	3,459.2	59.8	525.7
Others (Heavies)	389.4	6.7	Solid in Sol'n

Aqueous Waste (Case I):

<u>Component</u>	<u>Daily Prod'n (lb/day)</u>	<u>% of Stream</u>	<u>Est. Volume (gal/day)</u>
Water	2,210.7	57.0	2555.8
Sodium Formate	1,667.7	43.0	Solid in Sol'n

Aqueous Waste (Case II):

<u>Component</u>	<u>Daily Prod'n (lb/day)</u>	<u>% of Stream</u>	<u>Est. Volume (gal/day)</u>
Water	12,965.1	88.6	2555.8
Sodium Formate	1,667.7	11.4	Solid in Sol'n

Please estimate waste costs on a *per lb.* basis for this project and disposal options—i.e. *transfer to ponds, incineration, landfill, etc.*).

Pleau File

SECRECY AGREEMENT

This Agreement is made and entered as of the date last below written by and between:

Rhône-Poulenc Agro Matières Actives, a French "société en nom collectif" with a capital of 640 250 000 French Francs with its registered office at 14/20, rue Pierre Baizet - 69009 LYON - FRANCE, registered in Lyon under number B 399 135 532,

Represented by Mr Hans MOSER, Strategic Purchasing Director, Business Development,

Hereinafter referred to as "RPAMA",

as the first Party,

And

Cedar Chemical Corporation, a company duly organised under — law with offices at 5100 POPLAR Avenue, MEMPHIS, TN 38137 USA,

Represented by Mr Geoffrey L. PRATT, Vice President

Hereinafter referred to as "CEDAR",

as the second Party,

Witnesseth:

- ◆ WHEREAS, RPAMA and CEDAR have entered into a certain Secrey Agreement dated as of May 14th, 1999 in relation to the exchange of technical and proprietary information of a confidential nature, including manufacturing and formulation know-how for the manufacture and formulation of Cyclanilide or CS-DCA;
- ◆ WHEREAS, pursuant to a certain Patent and Technical License Agreement dated July 12th, 1999 RPAMA has obtained the right from DEGUSSA-HÜLS to divulge certain valuable technical and proprietary information of a confidential nature of DEGUSSA-HÜLS origin relating to the production of CS-DCA (hereinafter referred to as "the DEGUSSA-HÜLS Confidential Information") to RPAMA's toll manufacturers provided such toll manufacturers agree to be bound by the confidentiality and non-use obligations under the Patent and Technical License Agreement;

- ◆ WHEREAS, RPAMA and CEDAR are interested in exchanging the DEGUSSA-HÜLS Confidential Information for the purpose of evaluating their interest to enter into a toll manufacturing or purchase agreement, or any similar agreement, of CS-DCA (hereinafter "the Purpose").

NOW, THEREFORE, in consideration of the premises and the terms and conditions herein contained the Parties have agreed as follows:

Clause 1. DEFINITIONS

"Affiliate(s)" means any entity that directly or indirectly, through one or more intermediaries, now or hereafter controls or is controlled by or is under common control with a Party hereto, except in countries where ownership of a majority or controlling interest by a foreign entity is not permitted by law, rule or regulations, the parent's direct or indirect voting interest may be less than a majority or controlling interest.

"Control" (including the terms "controls", "controlled by", "controlling" and "under common control with") are understood as meaning the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person or entity whether through the ownership of voting security, by contract or otherwise.

"CEDAR" means CEDAR and its Affiliates.

"DEGUSSA-HÜLS" means DEGUSSA-HÜLS and its Affiliates.

"RPAMA" means RPAMA and its Affiliates.

"Third Party" means any Party other than RPAMA, CEDAR, DEGUSSA-HÜLS and/or their Affiliates.

Clause 2. SECRECY

- 2.1. During the term of this Agreement, CEDAR agrees to hold in trust and confidence and not to disclose to any Third Party, nor to use for its own purposes other than the toll manufacture of CS-DCA for and on behalf of RPAMA any and all of the DEGUSSA-HÜLS Confidential Information disclosed to it by RPAMA under this Agreement.

- 2.2. CEDAR agrees to make available such DEGUSSA-HÜLS Confidential Information only to those of its employees who need to have access to it to carry out the toll manufacture of CS-DCA and shall cause such employees to be bound by the confidentiality and non-use obligations provided herein.
- 2.3. CEDAR shall be responsible for any breach of the confidentiality and non-use obligations provided herein by such employees, whether or not such employees continue to be employees of CEDAR.
- 2.4. CEDAR agrees to return promptly, free of charge, all of the DEGUSSA-HÜLS Confidential Information which is in written form to RPAMA at any time, upon RPAMA's request.
- 2.5. Any documents, drawings, electronic media and other material containing any part of the DEGUSSA-HÜLS Confidential Information shall be destroyed by shredding into pieces or returned to RPAMA upon expiration or termination of this Agreement.
- 2.6. CEDAR's obligations of non-disclosure does not apply to such information and document, which:
- at the time of the disclosure are generally available to the public; or
 - after disclosure become generally available to the public through no fault of CEDAR; or
 - CEDAR can prove to have been in its lawful possession at the time of disclosure by RPAMA.

Clause 3. LIMITATION OF RIGHT

Nothing herein contained shall be construed as granting to a Party any right, including any license, either express or implied, under any Confidential Information disclosed to a Party by another Party hereunder, except for a license to use the Confidential Information to conduct the evaluation as contemplated by the Agreement.

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Clause 4. DURATION

This Agreement shall become effective as from the date of its last signature by the parties hereto. Unless terminated earlier or otherwise extended by mutual agreement in writing, this Agreement shall terminate one (1) year later, except for the confidentiality obligations set forth in Clause 2 which shall survive termination or expiration of this Agreement for a period of five (5) years following termination or expiration under article 6.1 of the Patent and Technical License Agreement dated July 12th, 1999 between RPAMA and DEGUSSA-HÜLS.

Clause 5. AMENDMENT

No amendment or consensual cancellation of this Agreement or any provisions or terms thereof and no extension of time or waiver or relaxation or suspension of any of the provisions or terms of this Agreement shall be binding unless recorded in a written document signed by the Parties. Any such extension, waiver or relaxation or suspension which is so given or made shall be strictly construed as relating to the matter in respect whereof it was made or given.

Clause 6. ENTIRETY

This Agreement contains the entire understanding between the Parties hereto regarding the subject matter hereof, and cancels and supersedes all previous agreements, representations and understandings, written or oral between the Parties hereto regarding the subject matter hereof.

Clause 7. ASSIGNMENT

The rights and obligations of this Agreement cannot be assigned to a Third Party by a Party without the prior written consent of the other Party.

Clause 8. APPLICABLE LAW

This Agreement shall be interpreted and construed in accordance with, and its performance shall be governed by French law.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed as of the day and year last below written.

Rhône-Poulenc Agro Matières Actives



Name: Hans MOSER

Title: Strategic Purchasing Director,

Business Development

Date: 12.12.99

Cedar Chemicals Corporation



Name: Geoffrey L. PRATT

Title: Vice President

Date: November 22, 1999.

CEDAR - WEST HELENA
Raw materials used - Finish goods used - Packaged - Mfg -
Shipments - Receipts
12/31/1999

CC C McGee
B. Christian
P. Fields

Jim Rone
File Copy

1 of 18

Item No	Std Factor	Usage Factor	Raw Materials Used	Finish Goods																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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AB0000074961

Item No	Std Factor	Usage Factor	Raw Materials Used	Finish Goods	
				Used	Mfg'd
Stam	3400				253,424
P Tech	3000	4.1270	4 2106	1,087,060	
F Tech	3050				
Isoph/Mibk	41080	3.9280	3 8528	976,390	
Emul	40600	0 9030	0 8918	226,000	
Isoph	40500				
MO	40400				

		Dr		Cr	
S	811	1420	1,852,529.44	C	170 6740 (1,852,529.44)
C	170	6810	1,077,730.60	S	702 1420 (1,077,730.60)
C	170	6835		S	804 1420
C	170	5780	507,722.80	S	721 1460 (507,722.80)
C	170	5670	158,200.00	S	718 1460 (158,200.00)
C	170	5680		S	717 1460
C	170	5660		S	716 1460

Item Description	Item No	Total Qty's	
		R/M's	F/G's
Propanil Tech	3000		2,109,120
Flake Tech	3050		
M O	40400		
Isoph	40500	6,060	
Emul	40600	258,047	
Emul C8173	40610	48,052	
Aromatic B	40800	140,100	
Armul	40900	3,920	
Isoph/Mibk	41080	976,390	
Sun Oil	41640	1,300	
Mollinate	41760	222,244	
Tenneco 500	45320		

3# Packaged:	Item No		Mt Drms	Bulk	Full Drms
3# 60L	3190	13 210			
3# 55's	3210	55.000			
3# 200L's	3250	52 840			
Propanil 360 210L's	10020	55.480			
3# Bulk	3200		2,695	2,695	
3# 20L Used	3220				
3# 200L Used	3250				
35's	42210				
55M's	42300		51		
55 M's Black	42550				

S	854	1420		C	167 6740 (18,258.00)
S	806	1420			
S	807	1420	18,258.00		
S	828	1420			
C	167	6820	16,466.45	S	802 1420 (16,466.45)
				S	819 1420
				S	807 1420
C	1067	5890	1,124.55	S	738 1460 (1,124.55)
				S	742 1460
				S	756 1460
S	819	1420		C	160 6740
C	160	6820		S	802 1420
C	1060	5890		S	739 1460

3# 20L	3220	5 280			
3# Bulk	3200				
Mt 20L	42000				
4# Packaged:	Item No		Mt Drms	Bulk	Full Drms
Propanil 4# 20L	3290	5 280			
4# 55's	3310	55.000			
Propanil 4# 210L	3320	55.480			
Propanil 4# 200L	3330	52.840			
Cedar Blue Drum 35 gal	3340	35.000			
4# bulk	3300				
35 m's	42210				
Mt 20L	42000				
35 m's Plastic	42230				
55 m's	42300				
55 m's	42550				

S	812	1420		C	169 6740
S	818	1420			
S	836	1420			
S	839	1420			
S	814	1420			
C	169	6830		S	817 1420
C	1069	5890		S	738 1460
				S	739 1460
				S	793 1460
				S	742 1460
				S	756 1460

Stam Packaged:		Item No		Mt Drms	Bulk Used	Full Drms
Stam 35's		3420	35.000			7,105
bulk		3400		248,675	248,675	
35 m's		42220		7,105		
RiceSolo Packaged:		Item No		Mt Drms	Bulk Used	Full Drms
RiceSolo 30's		3080	30.000			2,447
bulk		3130		73,410	73,410	
30 m's		42100		2,447		

S	813	1420	1,839,665.00	C	172 6740 (1,839,665.00)
C	172	6825	1,817,814.25	S	811 1420 (1,817,814.25)
C	1072	5890	106,575.00	S	780 1460 (106,575.00)
S	862	1420	1,161,346.20	C	168 6740 (1,161,346.20)
C	168	6825	1,120,970.70	S	861 1420 (1,120,970.70)
C	1068	5890	38,784.95	S	752 1460 (38,784.95)

Diuron Prod'n:	Item No	Std	Act	R/M Used	F/G Prod
Diuron Standard Grade	3030				
Diuron B Grade	3040				
DCPI	40150	0.8340			
DMA	41650	0.2100			
Heptane	41660	0.0716			
Sulfuric Acid	41520				
50% Rayon Caustic	45090				

S	818	1420		C	157 6740
S	844	1420			
C	157	5635		S	715 1460
C	157	5610		S	744 1460
C	157	5650		S	745 1460
				S	762 1460
				S	782 1460

Stanol Prod'n:	Item No	Std	Act	R/M Used	F/G Prod						
Stanol	5350				25,568	Kg					
Sterol	97100		0 1452	6,173							
N-Propanol	90320		0 3148	13,380							
Catalyst	97110										
Hydrogen	41030										
Pentabrom Prod'n:	Item No	Std	Act	R/M Used	F/G Prod						
Pentabrom	5160				42,506						
Red Acid (produced)	95540				11,839						
Diphenyl Oxide	91000		0 5950	25,290							
Bromine	91010		2 5882	110,013							
50% Caustic	45090										
TAP	91020		0 2669	11,345							
Acifluorfen Prod'n:	Item No	Std	Act	R/M Used	F/G Prod						
Acifluorfen	5120				140,827	100% AI					
Mixed Nitrating Acid	41700										
Perkone D	41740	0 1200									
Acetic Anhydride	41710	0 7200	0 6965	97,804							
Sulfuric Acid	41010	0 2400	0 1415	18,900							
Nitric Acid	41020	0 2600	0 2525	35,504							
Ethylene Dichloride	41720										
50% Caustic	41530	1 2000	1 3538	190,383							
Soda Ash	41050										
R118118	90200	3 5400	2.8173	398,190							
TA Prod'n:	Item No	Std	Act	R/M Used	F/G Prod						
TA Prod'n	17000										
Nitromethane	42680	7600									
Formaldehyde	41540	2 5000									
Methanol	42640	.2460									
Sulfuric Acid	41520	.0660									
Raney Nickel	42690	0110									
Hydrogen	41030	.1420									
50% Caustic	41530	1000									
FMG 5-Nitro Prod'd:	Item No	Std	Act	R/M Used	F/G Prod						
5-Nitro	5290				100% AI						
Step 3	90800										
Step 4	90810										
Step 5	90820										
Calcium Chloride	90830										
Chlorine	90720										
A Sulfate	90710										
G Acid	90700										
50% Caustic	45090										
20% Oleum	90770										
Methanol	90790										
Soda Ash	90740										
Toluene	90760										
93% Sulfuric Acid	90750										
Mixed Acid	90730										
CYMP Prod'd:	Item No	Std	Act	R/M Used	F/G Prod						
CYMP	5110				100% AI						
DICNIL	90840										
IPA	90850										
50% Caustic	41530										
Catalyst	90870										
Hydrogen	41030										
Hcl	90860										
DoverPhos Prod'd:	Item No	Std	Act	R/M Used	F/G Prod						
DoverPhos	5150										
Therminol	90900										
TTP	90910										
2,4 DCP	90920										
Methanol	90930										
Methanol	42640										
Xylene	90940										
PE	90950										
Phenol	90960										
Caustic	90970										

Packaged Plant:															
Pure Trom 25 Kg Pig'd	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs								
Tromethamine Bulk Used	17120	55 120				353	19,457	C	183	6740	(73,335 75)	S	843	1420	73,335 75
Trometamol 25 Kg	17000		19,457		19,457			C	183	6860	73,352 89	S	849	1420	(73,352.89)
Trometamol 50 Kg	17220							S	845	1420		C	181	6740	
Tris Ultr Pure 100Kg	17240							C	181	6740		S	847	1420	
Pure Tris-Hcl 100Kg	17250	220 480						C	181	6740		S	853	1420	
Tris Ultrapure 25kg	17260	220 480						C	181	6740	(141,685.50)	S	855	1420	
Tromethamine Bulk Used	17270	55 120				682	37,592					S	859	1420	141,685.50
Wham Packaged:	17000		37,592		37,560			C	181	6860	141,601 20	S	849	1420	(141,601 20)
Wham Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs								
Wham 2x2 5	3180							S	832	1420		C	164	6740	(1,107 00)
Wham 100L	3230							S	828	1420					
Wham 30	3240					(196)	(5,680)	S	805	1420	(43,394 40)				
S Wham 30	3350					207	6,210	S	831	1420	45,829.80				
S Wham 2x2.5's	3360					(36)	(180)	S	834	1420	(1,328.40)				
S Wham Bulk	3370							S	856	1420					
S Wham 2x2.5's Used	3360							C	164	6835		S	834	1420	
Flaked Tech	3050	4 1240	400 0000		60,000			C	164	6835	63,000.00	S	804	1420	(63,000 00)
Morwet	41460	0 0970	11 6800	1,752				C	164	5850	21,667 46	S	726	1460	(1,892.16)
Polyton O	41470	0.0100	0 7333	110								S	727	1460	(88.20)
Glycerine	41480	0 2430	25.9600	3,894								S	728	1460	(1,752.30)
Altonio	41490	0 3690										S	729	1460	
Kelzan	41510	0.0050	1 2400	186								S	761	1460	(985.80)
Veegum	41570	0 1170	13 2333	1,885								S	731	1460	(3,672 25)
Antifoam DC 1500	45140	0.0010	0.2333	35								S	785	1460	(220.50)
Technical Cerbyl	41670	0 0070	0 7000	105								S	757	1460	(393 75)
Ethephon	41680	0.0400	0.6000	90								S	791	1460	(303.30)
Soprophor 4D384	41690	0.1460	41 0667	6,160								S	809	1460	(11,519 20)
Proxel	41730											S	825	1460	
Formaldehyde															
Glutaraldehyde	41750		2 2933	344								S	827	1460	(860 00)
Citric Acid	41590											S	767	1460	
30 m's	42100			409				C	164	5870	6,482 65	S	752	1460	(6,482 65)
30 m's @ Pachuta	42100											S	752	1460	
2.5 m's	44200											S	759	1460	
Duet Packaged:	Item No	Std	Act	R/M's	F/G's	Cases/Drums	Gals/Lbs								
Duet 30	3430							S	823	1420		C	159	6740	
Flaked Tech	3050							C	159	6835		S	804	1420	
Veegum	41570							C	159	5850		S	731	1460	
Glycerine	41480											S	728	1460	
Soprophor	41690											S	809	1460	
Morwet	41460											S	726	1460	
Polyton O	41470											S	727	1460	
Ethephon	41680											S	791	1460	
Proxel	41730											S	825	1460	
Formaldehyde															
Antifoam	45140											S	785	1460	
Bensulfuron Methyl Tech															
Kelzan	41510											S	761	1460	
30 m's	42100							C	159	5870		S	752	1460	
Total Flaked Tech Used	3050				60,000										
Flake Tech Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs								
Inside Plant:															
Flake Tech 25Kg	3060					435	23,969	S	822	1420	30,667 50	C	155	6740	(30,667 50)
Flake Tech Used	3050		1 0003		23,976			C	155	6835	25,174 80	S	804	1420	(25,174.80)
Outside Plant:															
Flake Tech 25Kg	3060							S	822	1420		C	155	6740	
Flake Tech Used	3050							C	155	6835		S	804	1420	
Butox DF 7500 Produced:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs								
Outside Plant:															
Butoxone DF 7500 Bulk	15590							S	860	1420		C	420	6740	
Butoxone DF 7500	15580							S	420	1420		C	420	6740	
Butoxone DF 7500 Bulk Usec	15590							C	420	6870		S	860	1420	
2,4 D-B Acid	41550	.7650						C	420	5510		S	765	1460	
Continental Clay	41620	.1640						C	420	5850		S	746	1460	
HJ Sil 233	41500	.0050						C				S	737	1460	
Stepspere DF 200	41600	.0600						C				S	740	1460	
Stepwet DF 85	41610	.0050						C				S	743	1460	
Inside Plant:															
Butoxone DF 7500	15580							S	850	1420		C	420	6740	
Butoxone DF 7500 Bulk Usec	15590							C	420	6870		C	860	1420	

Butox 175 Packaged:										S of 18	
Butoxone 175 4x1	15260										
Butox 200 Bulk Used	15200	0.8152						S	410	1420	(218.00) C 410 6740 218.00
2 4, D B Acid	41550	1.8000	-131.9500	2.639				C	410	6850	S 430 1420
60% DMA	41580	0.8000	-486.6000	8.732				C	410	5510	5,278.00 S 765 1460 (5,278.00)
Citric Acid	41590	0.2800						C	410	5700	5,839.20 S 766 1460 (5,839.20)
Jugs	44100							C	410	5705	S 767 1460
Butoxone 175 2x2.5	15240					-60	-300	C	410	5870	S 749 1460
Butox 200 Bulk Used	15200	0.8152						S	410	1420	(3,240.00) C 410 6740 3,240.00
2 4, D B Acid	41550	1.8000						C	410	6850	S 430 1420
60% DMA	41580	0.8000						C	410	5510	S 765 1460
Citric Acid	41590	0.2800						C	410	5700	S 766 1460
Jugs	44200							C	410	5705	S 767 1460
Butoxone 175 55	15270							C	410	5870	S 759 1460
Butox 200 Bulk Used	15200	0.8152						S	410	1420	C 410 6740
2 4, D B Acid	41550	1.8000						C	410	6850	S 430 1420
60% DMA	41580	0.8000						C	410	5510	S 765 1460
Citric Acid	41590	0.2800						C	410	5700	S 766 1460
Jugs	44200							C	410	5705	S 767 1460
Butox 175 Pkg'd (cont'd)	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs				
Citric Acid	41590	0.2800						C	410	5705	S 767 1460
Butox 200 Packaged:	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs				
Butoxone 200 4x1	15560							S	430	1420	C 430 6740
Butox 200 Bulk Used	15200	1.0000						C	430	6850	S 824 1420
2 4, D B Acid	41550	2.0800						C	430	5510	S 765 1460
60% DMA	41580	1.1000						C	430	5700	S 766 1460
Citric Acid	41590	0.4200						C	430	5705	S 767 1460
Jugs-1 gal plastic	44100							C	430	5870	S 749 1460
HCC-Cordelle Cont'd											
Butox 200 Packaged Cont	Item No	Std	Act	R/M's	F/G's	Cases	Gals/Lbs				
Butoxone 200 2x2.5	15540					-288	-1,440	S	430	1420	(17,683.20) C 430 6740 17,683.20
Butox 200 Bulk Used	15200	1.0000						C	430	6850	S 824 1420
2 4, D B Acid	41550	2.0800						C	430	5510	S 765 1460
60% DMA	41580	1.1000						C	430	5700	S 766 1460
Citric Acid	41590	0.4200						C	430	5705	S 767 1460
Jugs-2 5 gal plastic	44200							C	430	5870	S 759 1460
Butoxone 200 55	15570							S	430	1420	C 430 6740
Butox 200 Bulk Used	15200	1.0000						C	430	6850	S 824 1420
2 4, D B Acid	41550	2.0800						C	430	5510	S 765 1460
60% DMA	41580	1.1000						C	430	5700	S 766 1460
Citric Acid	41590	0.4200						C	430	5705	S 767 1460
Shipped from Plant:											
	Item No			Location		Containers		lbs/gals			
Prop Tech	3000		4	Plant							
DCA	3020		4	Plant				11,000			
Diuron	3030		4	Plant							
Flake Tech	3050		4	Plant							
Flake Tech 25KG	3060		4	Plant							
RiceSolo 30's	3080		4	Plant							
3# 50 L	3190		4	Plant			1,120	61,712			
3# Bulk	3200		4	Plant			2,445	73,350			
3# 55's	3210		4	Plant							
3# 20L	3220		4	Plant							
3# 200L	3250		4	Plant							
4# 20L	3290		4	Plant							
4# Bulk	3300		4	Plant							
4# 55's	3310		4	Plant							
4# 210 L	3320		4	Plant							
4# 200 L	3330		4	Plant							
4# 35's	3340		4	Plant							
Stam Bulk	3400		4	Plant							
Stam 35's	3420		4	Plant							
Propanil 360 210L	10020		4	Plant							
Ethephon 100%	15740		4	Plant							
Tromethamine Bulk	17000		4	Plant							
Tham 25 KG	17020		4	Plant							
Tromethamine 25KG	17120		4	Plant							
Trometamol 50KG	17240		4	Plant							
Tns Ultra Pure 100Kg	17250		4	Plant							
Pure Tris-Hcl 100Kg	17260		4	Plant							
Tris Ultra Pure 25Kg	17270		4	Plant							
MO	40400		4	Plant							
Isoph	40500		4	Plant							

Shipped from Plant Conf'd:

Item No	Location	Containers	lbs/gals
4# Emul	4 Plant		
Emul	4 Plant		
TA-40 Waste Water	4 Plant		

Shipped from O/S Plant:

Item No	Location	Containers	lbs/gals
DCA	97 In Transit		
Diuron Std	10 B/H		83,600
Diuron Std	52 Gulf States		119,049
Diuron Std	97 In Transit		(551,591)
Diuron B Grade	4 P/I		
Flaked Tech	10 B/H		1,042,500
Flaked Tech	78 Odom-Pachuta		
Flaked Tech	88 Odom		
Flaked Tech 25Kg	78 Odom-Pachuta		
Flaked Tech 25Kg	88 Odom		
Diuron Cal 224 Kg	88 Odom		
Wham! EZ 2x2.5 gal	10 B/H		
Wham! EZ 2x2.5 gal	88 Odom		
Wham 100 Lber	88 Odom		
Wham 30gls	10 B/H		
Wham 30gls	59 Rice Farmers		
Wham 30gls	78 Odom-Pachuta		
Wham 30gls	88 Odom		
Wham 30gls	88 Amer Rice		
Wham 5gls	10 B/H		
Wham 5gls	88 Odom		
Wham 5gls	88 Amer Rice		
4# 35	10 B/H	2,500	87,500
4# 35	15 Amer Whse		
4# 35	59 Rice Farmers		
Super Wham 30	10 B/H		
Super Wham 30	15 Amer Whse		
Super Wham 30	59 Rice Farmers		
Super Wham 30	78 Odom-Pachuta		
Super Wham 30	88 Odom		
Super Wham 2x2.5	10 B/H		
Super Wham 2x2.5	88 Odom		
Super wham Bulk	88 Odom		
Stam 35	10 B/H	2,860	100,100
Duet 30	10 B/H		
Duet 30	78 Odom-Pachuta		
Duet 30	88 Odom		
Butox 200 Bulk	57 HCC-Cordete		
Butox 175 2x2.5	10 B/H		
Butox 175 2x2.5	20 Gray-Albany		
Butox 175 2x2.5	21 Gray-Ashburn		
Butox 175 2x2.5	30 AWS		
Butox 175 2x2.5	57 HCC-Cordete		
Butox 175 4x1	10 B/H		
Butox 175 4x1	11 Cascio		
Butox 175 4x1	20 Gray-Albany		
Butox 175 4x1	21 Gray-Ashburn		
Butox 175 4x1	30 AWS		
Butox 175 4x1	57 HCC-Cordete		
Butox 200 2x2.5	10 B/H		
Butox 200 2x2.5	15 American W/H	360	1,800
Butox 200 2x2.5	20 Gray-Albany		
Butox 200 2x2.5	21 Gray-Ashburn		
Butox 200 2x2.5	30 AWS		
Butox 200 2x2.5	35 Robertson		
Butox 200 2x2.5	57 HCC-Cordete		
Butox 200 4x1	10 B/H		
Butox 200 4x1	11 Cascio		
Butox 200 4x1	15 American W/H		
Butox 200 4x1	20 Gray-Albany		
Butox 200 4x1	21 Gray-Ashburn		
Butox 200 4x1	30 AWS		
Butox 200 4x1	35 Robertson		
Butox 200 4x1	57 HCC-Cordete		

Shipped from Q/S Plant Conf'd:

	Item No	Location	Containers	Lbs/gals
Butox 7500 10x2.33	15580	10 B/H	100	2,330
Butox 7500 10x2.33	15580	15 American W/H		
Butox 7500 10x2.33	15580	20 Gray-Albany		
Butox 7500 10x2.33	15580	21 Gray-Ashburn		
Butox 7500 10x2.33	15580	86 Odom		
Butox 7500 10x2.33	15580	30 AVVS	216	11,908
Elthephon	15740	78 Odom-Pachuta		
Tromethamine 25Kg	17120	31 Mentex		
Tromethamine 25Kg	17120	16 Antwerp		
Tris Ultra Pure 25 Kg	17270	31 Meritex		
2,4 DB Acid	41550	97 In Trans	12	681
Mt 30 gal drum	42100	86 Odom-Waynesboro		

Transfers:

	Item No	From	To	Cases/Drums	Gals/Lbs
DCA	3020	4 Pit	87 In Trans		
DCA	3020	4 Pit	100 EMV-Hungary		
DCA	3020	97 In Transit	4 Pit		
DCA	3020	97 In Transit	52 Gulf States		
DCA	3020	97 In Transit	100 EMV-Hungary		
DCA	3020	100 EMV-Hungary	4 Pit		
Diuron	3030	4 Pit	10 B/H		
Diuron	3030	4 Pit	86 Odom		
Diuron	3030	10 B/H	4 Pit		
Diuron	3030	10 B/H	86 Odom		
Diuron	3030	78 Odom-Pachuta	4 Pit		
Diuron	3030	86 Odom	78 Odom-Pachuta		
Diuron	3030	97 In Transit	52 Gulf States		
Diuron B Grade	3040	4 Pit	10 B/H		
Diuron B Grade	3040	10 B/H	4 Pit		
Flake Tech	3050	4 Pit	10 B/H		738,500
Flake Tech	3050	4 Pit	58 HCC-W/H		
Flake Tech	3050	4 Pit	78 Pachuta		
Flake Tech	3050	4 Pit	86 Odom		
Flake Tech	3050	10 B/H	4 Pit		
Flake Tech	3050	10 B/H	86 Odom		608
Flake Tech	3050	10 B/H	58 HCC-W/H		
Flake Tech	3050	10 B/H	78 Pachuta		
Flake Tech	3050	86 Odom	4 Pit		
Flake Tech	3050	86 Odom	10 B/H		
Flake Tech	3050	86 Odom	78 Odom-Pachuta		4,500
Flake Tech 25KG	3060	88 Odom	4 Pit		
Flake Tech 25KG	3060	88 Odom	78 Odom-Pachuta		
Flake Tech 25KG	3060	4 Pit	88 Odom		
Wham 2x2.5	3180	10 B/H	4 Pit	237	13,059
Wham 2x2.5	3180	10 B/H	86 Odom Ind		
Wham 2x2.5	3180	86 Odom Ind	4 Pit		
Wham 2x2.5	3180	86 Odom Ind	10 B/H		
3# 20L	3220	25 Platte	4 Pit		
3# 20L	3220	4 Pit	25 Platte		
Wham 30	3240	4 Pit	86 Odom		
Wham 30	3240	4 Pit	10 B/H		
Wham 30	3240	10 B/H	59 Rice Farmers		
Wham 30	3240	10 B/H	86 Odom		
Wham 30	3240	10 B/H	88 American Rice	61	1,830
Wham 30	3240	59 Rice Farmers	10 B/H		
Wham 30	3240	78 Odom Pachuta	86 Odom Ind		
Wham 30	3240	86 Odom Ind	4 Pit		
Wham 30	3240	86 Odom Ind	10 B/H		
Wham 30	3240	86 Odom Ind	59 Rice Farmers	243	7,290
Wham 30	3240	86 Odom Ind	78 Odom-Pachuta		
Wham 30	3240	86 Odom Ind	88 Amer Rice		
Wham 30	3240	88 Amer Rice	10 B/H		
Wham 5	3260	4 Pit	86 Odom		
Wham 5	3260	10 B/H	4 Pit	119	3,570
Wham 5	3260	10 B/H	86 Odom Ind		
Wham 5	3260	86 Odom Ind	88 American Rice		
Wham 5	3260	86 Odom Ind	10 B/H		
Wham 5	3260	86 Odom Ind	4 Pit		
Wham 5	3260	88 American Rice	10 B/H		

Transfers Cont'd:	Item No	From	To	Cases/Drums	Gals/Lbs
4# 35's	3340	4 Pit	10 B/H		
4# 35's	3340	4 Pit	15 American		
4# 35's	3340	4 Pit	59 Rice Farmers		
4# 35's	3340	10 B/H	4 Pit		
4# 35's	3340	10 B/H	15 American		
4# 35's	3340	15 American	4 Pit		
4# 35's	3340	59 Rice Farmers	4 Pit		
4# 35's	3340	59 Rice Farmers	10 B/H		
4# 35's	3340	88 American Rice C	4 Pit		
Super Wham 30	3350	4 Pit	10 B/H		
Super Wham 30	3350	10 B/H	15 Amer Whse		
Super Wham 30	3350	10 B/H	59 Rice Farmers		
Super Wham 30	3350	10 B/H	86 Odom	7	210
Super Wham 30	3350	10 B/H	78 Odom-Pachuta		
Super Wham 30	3350	15 Amer Whse	86 Odom		
Super Wham 30	3350	15 Amer Whse	10 B/H		
Super Wham 30	3350	59 Rice Farmers	10 B/H		
Super Wham 30	3350	78 Odom Pachuta	86 Odom	172	5,160
Super Wham 30	3350	78 Odom Pachuta	10 B/H		
Super Wham 30	3350	86 Odom Ind	4 Pit		
Super Wham 30	3350	86 Odom Ind	10 B/H	240	7,200
Super Wham 30	3350	86 Odom Ind	15 Amer Whse		
Super Wham 30	3350	86 Odom Ind	59 Rice Farmers		
Super Wham 2x2 5	3360	4 Pit	10 B/H		
Super Wham 2x2 5	3360	4 Pit	86 Odom Ind		
Super Wham 2x2 5	3360	10 B/H	4 Pit		
Super Wham 2x2 5	3360	10 B/H	86 Odom Ind	38	180
Super Wham 2x2 5	3360	78 Odom-Pachuta	86 Odom Ind		
Super Wham 2x2 5	3360	86 Odom Ind	4 Pit		
Super Wham 2x2 5	3360	86 Odom Ind	10 B/H		
Super Wham 2x2 5	3360	86 Odom Ind	78 Pachuta		
Stam 35	3420	4 Pit	10 B/H	6,645	232,575
Stam 35	3420	10 B/H	4 Pit		
Duet 30	3430	10 B/H	86 Odom-Waynesboro	9	270
Duet 30	3430	86 Odom Ind	10 B/H		
Duet 30	3430	10 B/H	78 Pachuta		
Duet 30	3430	78 Odom-Pachuta	10 B/H		
Duet 30	3430	86 Odom Ind	78 Pachuta		
Butox 200 Bulk	15200	97 In Transit	57 HCC Cordale		
Butox 175 2x2.5	15240	10 B/H	57 HCC Cordale		
Butox 175 2x2.5	15240	11 Cascio	10 B/H		
Butox 175 2x2.5	15240	20 Gray-Albany	21 Gray-Ashburn		
Butox 175 2x2.5	15240	20 Gray-Albany	57 HCC Cordale		
Butox 175 2x2.5	15240	21 Gray-Ashburn	10 B/H		
Butox 175 2x2.5	15240	21 Gray-Ashburn	20 Gray-Albany		
Butox 175 2x2.5	15240	21 Gray-Ashburn	57 HCC Cordale		
Butox 175 2x2.5	15240	21 Gray-Ashburn	30 AWS		
Butox 175 2x2.5	15240	57 HCC-Cordale	10 B/H		
Butox 175 2x2.5	15240	57 HCC-Cordale	11 Cascio		
Butox 175 2x2.5	15240	57 HCC-Cordale	20 Gray-Albany		
Butox 175 2x2.5	15240	57 HCC-Cordale	21 Gray-Ashburn		
Butox 175 2x2.5	15240	57 HCC-Cordale	30 AWS		
Butox 175 4x1	15260	10 B/H	4 Pit		
Butox 175 4x1	15260	10 B/H	21 Gray-Ashburn		
Butox 175 4x1	15260	10 B/H	57 HCC Cordale		
Butox 175 4x1	15260	20 Gray-Albany	10 B/H		
Butox 175 4x1	15260	20 Gray-Albany	21 Gray-Ashburn		
Butox 175 4x1	15260	20 Gray-Albany	30 AWS		
Butox 175 4x1	15260	20 Gray-Albany	57 HCC Cordale		
Butox 175 4x1	15260	21 Gray-Ashburn	10 B/H		
Butox 175 4x1	15260	21 Gray-Ashburn	11 Cascio		
Butox 175 4x1	15260	21 Gray-Ashburn	20 Gray-Albany		
Butox 175 4x1	15260	21 Gray-Ashburn	30 AWS		
Butox 175 4x1	15260	21 Gray-Ashburn	57 HCC Cordale		
Butox 175 4x1	15260	30 AWS	20 Gray-Albany		
Butox 175 4x1	15260	57 HCC-Cordale	10 B/H		
Butox 175 4x1	15260	57 HCC-Cordale	11 Cascio		
Butox 175 4x1	15260	57 HCC-Cordale	20 Gray-Albany		
Butox 175 4x1	15260	57 HCC-Cordale	21 Gray-Ashburn		

Transfers Cont'd:	Item No	From	To	Cases/Drums	Gals/Lbs
Butox 175 4x1	15260	57 HCC-Cordoba	30 AWS		
Butox 200 2x2.5	15540	10 B/H	11 Cascio		
Butox 200 2x2.5	15540	10 B/H	15 American		
Butox 200 2x2.5	15540	10 B/H	35 Robertson		
Butox 200 2x2.5	15540	10 B/H	57 HCC-Cordoba		
Butox 200 2x2.5	15540	11 Cascio	10 B/H		
Butox 200 2x2.5	15540	11 Cascio	30 AWS		
Butox 200 2x2.5	15540	11 Cascio	57 HCC-Cordoba		
Butox 200 2x2.5	15540	15 American	57 HCC		
Butox 200 2x2.5	15540	15 American	35 Robertson		
Butox 200 2x2.5	15340	20 Gray-Albany	4 Pit		
Butox 200 2x2.5	15540	20 Gray-Albany	15 American		
Butox 200 2x2.5	15540	20 Gray-Albany	35 Robertson		
Butox 200 2x2.5	15540	20 Gray-Albany	57 HCC Cordoba		
Butox 200 2x2.5	15540	21 Gray-Ashburn	15 American		
Butox 200 2x2.5	15540	21 Gray-Ashburn	30 AWS		
Butox 200 2x2.5	15540	21 Gray-Ashburn	35 Robertson		
Butox 200 2x2.5	15540	21 Gray-Ashburn	15 American		
Butox 200 2x2.5	15540	30 AWS	15 American		
Butox 200 2x2.5	15540	30 AWS	35 Robertson		
Butox 200 2x2.5	15540	35 Robertson	15 American		
Butox 200 2x2.5	15540	57 HCC-Cordoba	10 B/H		
Butox 200 2x2.5	15540	57 HCC-Cordoba	15 American		
Butox 200 2x2.5	15540	57 HCC-Cordoba	20 Gray-Albany		
Butox 200 2x2.5	15540	57 HCC-Cordoba	21 Gray-Ashburn		
Butox 200 2x2.5	15540	57 HCC-Cordoba	30 AWS		
Butox 200 2x2.5	15540	57 HCC-Cordoba	35 Robertson		
Butox 200 4x1	15560	10 B/H	11 Cascio		
Butox 200 4x1	15560	11 Cascio	10 B/H		
Butox 200 4x1	15560	11 Cascio	35 Robertson		
Butox 200 4x1	15560	15 Amer Whse	35 Robertson		
Butox 200 4x1	15560	20 Gray-Albany	30 AWS		
Butox 200 4x1	15560	20 Gray-Albany	35 Robertson		
Butox 200 4x1	15560	21 Gray-Ashburn	30 AWS		
Butox 200 4x1	15560	57 HCC-Cordoba	20 Gray-Albany		
Butox 200 4x1	15560	57 HCC-Cordoba	21 Gray-Ashburn		
Butox 200 4x1	15560	57 HCC-Cordoba	35 Robertson		
Butox 7500 DF 10x2.32	15580	4 Pit	10 B/H		
Butox 7500 DF 10x2.33	15580	4 Pit	15 American		
Butox 7500 DF 10x2.33	15580	10 B/H	15 American	320	7,456
Butox 7500 DF 10x2.33	15580	15 American	10 B/H		
Butox 7500 DF 10x2.33	15580	21 Gray-Ashburn	15 American		
Butox 7500 DF 10x2.33	15580	20 Gray-Albany	15 American		
Butox 7500 DF 10x2.33	15580	88 Odom	10 B/H		47,702
Butox 7500 DF 10x2.33	15580	88 Odom	21 Gray-Ashburn		
Butox 7500 DF Bulk	15590	86 Odom	4 Pit		
Tromethamine Bulk	17000	4 Pit	31 Mentex		
Tromethamine Bulk	17000	31 Mentex	4 Pit		49,308
Tromethamine 25 Kg	17120	10 B/H	4 Pit		
Tromethamine 25 Kg	17120	4 Pit	31 Mentex	660	38,379
Tromethamine 25 Kg	17120	4 Pit	16 Antwerp		
Tromethamine 25 Kg	17120	31 Mentex	4 Pit		
Tromethamine 25 Kg	17120	31 Mentex	16 Antwerp		
Tris Ultra Pure 25 Kg	17270	4 Pit	16 Antwerp		
Tris Ultra Pure 25 Kg	17270	4 Pit	31 Mentex		
Tris Ultra Pure 25 Kg	17270	31 Mentex	4 Pit		
DCPI	40150	4 Pit	52 Gulf States		
DCPI	40150	52 Gulf States	4 Pit		
DCPI	40150	97 In-Transit	52 Gulf States		
DCPI	40150	97 In-Transit	4 Pit		
ODCB	41000	97 In-Transit	4 Pit		
Hi Sil 233	41500	10 B/H	86 Odom-Waynesboro		
2,4 D-B Acid	41550	20 Gray-Albany	57 HCC-Cordoba		
2,4 D-B Acid	41550	20 Gray-Albany	86 Odom-Waynesboro		
2,4 D-B Acid	41550	21 Gray-Ashburn	57 HCC-Cordoba		
2,4 D-B Acid	41550	86 Odom	10 B/H		
Citric Acid	41590	57 HCC-Cordoba	20 Gray-Albany		
Stepwet	41610	10 B/H	86 Odom-Waynesboro		
Conf Clay	41620	10 B/H	86 Odom-Waynesboro		

Transfers Cont'd:	Item No	From	To	Cases/Drums	Gals/Lbs
Ethephon	41680	4 Pit	86 Odom-Wayneboro		
Soprophor	41690	78 Pachuta	86 Odom-Wayneboro		
Mofinate	41760	97 In-Transit	4 plant		178,372
Mt 30 gallon Drums	42100	78 Odom-Pachuta	86 Odom-Wayneboro		20
Mt 30 gallon Drums	42100	88 Odom	78 Odom-Pachuta		
Mt 30 gallon Drums	42100	88 Odom	4 pit		
Mt 30 gallon Drums	42100	10 B/H	78 Odom-Pachuta		
Mt 30 gallon Drums	42100	4 pit	86 Odom-Wayneboro		
Nitromethane	42680	10 B/H	4 Pit		
1 Gal jug mt	44100	20 Gray-Albany	57 HCC-Cordele		
1 Gal jug mt	44100	57 HCC-Cordele	20 Gray-Albany		
2.5 Gal jug mt	44200	57 HCC-Cordele	78 Odom-Pachuta		
2.5 Gal jug mt	44200	57 HCC-Cordele	20 Gray-Albany		
2.5 Gal jug mt	44200	78 Odom-Pachuta	86 Odom-Wayneboro		
2.5 Gal jug mt	44200	88 Odom	78 Odom-Pachuta		
Arquar 2C75	45120	88 Odom	78 Odom-Pachuta		
Ingallite Blue Dye	45130	86 Odom	78 Odom-Pachuta		
55 Gal Mt	45150	86 Odom	78 Odom-Pachuta		
Butachlor	45200	86 Odom	78 Odom-Pachuta		

Raw Materials Received:	Item No	Lbs	Cordele/Gray	Item No	Gals/Lbs
DCA	3020				
Flake Tech	3050				
P Acid	40200	633,380	60 % DMA	41580	24,200
P Anthy	40300	179,280	Citric Acid	41590	
M O.	40400	-141,860	2,4 D-B Acid	41550	Albany
Isoph/Mibk	41080	1,038,660	Jugs-1 gal plastic	44100	
Isoph	40500		Jugs-2.5 gal Plast	44200	
Emul	40600	265,560			
Aromatic B	40800	181,880	Odom-Wayneboro		
Amul	40900		Carbyl Tech	41670	
Mibk	41300		Stepperse	41600	
Ethephon	41680		Glycerine	41480	
MCPA-IOE	40930		Alfomc	41490	
55 Crystal Litho	42550		HiSil	41500	
55 mt's Black	42300		Poly O	41470	
35 mt's Plastic	42220	7,200	Mowet	41460	
35 mt's Plastic	42230		30 mt's	42100	
30 mt's Plastic	42100	2,477	2.5 gal jugs	44200	
Emul (Vico)	40810	73,540	Citric Acid	41590	
50L mt's			Veegum	41570	
ODCB	41000	1,645,150	Continental Clay	41620	
Sulfuric Acid	41010	1,488,540	Keizan	41510	
Nitric Acid	41020	855,940	DC Antifoam	45140	880
Soda Ash	41050	5,400	Arquar	45100	
Lime	41080	60,000	Arquar 2C75	45120	
Caustic 50%	41530		Ingallite	45130	
50% Rayon Caus	45090	44,420	Soprophor 4D38	41690	
			Mt 30's Fibre		
Cleaning Solution		948	Stepwet	41610	
Ethephon	41680		Proxel	41730	
Platinum	41040 (In Transit)		Butachlor	45200	
Catalyst	41070	772	Ucarcide	41750	
Peroxide	41090	23,000	Odom-Pachuta		
Hydrogen	41030	74,794	2,4 D-B Acid	41550	
Methanol	42640		Mt 30's	42100	
mt 55's			Transit-N O.		
TEPA			Odom-Pachuta Cont'd		
Ferrous Sulfate			Ethephon	41680	
			Gray Dist		
15 gal Mt's			2,4 D-B Acid	41550	In Transit
Sun Oil	41640		2,4 D-B Acid	41550	Albany
Morpholine	41630		DCPI	40150	
55 gal Plastic			TA		
5 mt's	42000		50% Caustic	45090	
30 mt's			Nitromethane	42680	
20 L mt's	42000 Plast		Formaldehyde	41540	
2.5 mt's	44200		Methanol	42640	
			Raney Nickel	42690	
			Sulfuric Acid	41010	

Raw Materials Received Cont'd:	Item No	Lbs		Item No	Gals/Lbs
Diuron:			Sodium Bisulfide		
Heptane	41660		DMA	42700	
Sulfuric Acid	41520		Calcium Chloride		
Anhydrous DMA	41650		Caustic 50%	41530	
			Sulfuric Acid	41520	
PMC 5-Nitro:			BlackHawk:		
Step 3	90800		Nitromethane	42680	
Step 4	90810		2.5 Mt mgs	44200	
Step 5	90820		Mt 30's	42100	
Calcium Chloride	90830				
Chlorine	90720				
A Sulfate	90710				
G Acid	90700				
50% Caustic	45090		Acifluorfen:		
20% Oleum	90770		50% Caustic	41530	222,900
Methanol	90790		Mixed Nitrating Ac	41700	
Soda Ash	90740		Acetic Anhydride	41710	
Toluene	90760		98 % Sulfuric Acid	41010	
93% Sulfuric Acid	90750		Nitric Acid	41020	
Mixed Acid	90730		Acifluorfen Cont'd:		
Spent Acid			Ethylene Dichloride	41720	
			Calcium Chloride		
			R118118	90200	402,920
			Pertone D	41740	
Dover Phos:			Stanol:		
TPP	90910		N-Propanol	90320	
PE	90950		Sterol	97100	
DCP	90920		Catalyst	97110	
Xylene	90940		Cyclohexane	97120	
Methanol	90930				
Caustic	90970		Pentabrom:		
			50% Caustic	45090	44,680
			Bromine	91010	76,740

Adjustments to Inventory (Per physical; samples; etc.):

Product	Item No	Location	Type Adj	Cases/Drums	Gals/Lbs					
Propanil Tech	3000	4 Plant	Adj-Inv			S	1054	1440	S	702 1420
DCA	3020	97 In Transit	Adj-Inv			C	3053	5100	S	701 1420
DCA	3020	100 EMV-No Hungarian	Adj-Inv			C	3053	5100	S	701 1420
Flaked Tech	3050	4 Plant	Adj-Inv			C	3055	5100	S	804 1420
Flaked Tech	3050	10 B/H	Adj-Inv			C	3055	5100	S	804 1420
Flaked Tech	3050	78 Odom-Pachuta	Adj-Inv			C	184	6835	S	804 1420
Flaked Tech	3050	88 Odom	Adj-Inv			C	184	6835	S	804 1420
Flaked Tech 25 Kg	3060	4 Plant	Adj-Inv			C	855	7700	S	822 1420
Flaked Tech 25 Kg	3060	78 Odom-Pachuta	Adj-Inv			C	155	6740	S	822 1420
Flaked Tech 25 Kg	3060	86 Odom	Adj-Inv			C	3055	5100	S	822 1420
Diuron Std Grade	3030	4 Plant	Adj-Inv			C	3057	5100	S	816 1420
Diuron Std Grade	3030	10 B/H	Adj-Inv			C	3057	5100	S	816 1420
Diuron Std Grade	3030	97 In Transit	Adj Inv To Quantity Shipped to Customer			C	3057	5100	S	816 1420
Diuron B Grade	3040	4 Plant	Adj-Inv		63,600	C	3057	5100	(176,808.00) S	844 1420
Wham 2x2.5	3180	10 B/H	Adj to Physical			C	3064	5100	S	832 1420
Wham 2x2.5	3180	88 Odom	Adj to Physical			C	184	6740	S	832 1420
3# 55's	3210	4 plant	demo			C	3067	5100	S	808 1420
3# 20 L	3220	25 Plant	Leaker			C	3067	5100	S	819 1420
Wham 30's	3240	10 B/H	Adj-Inv	(1)	(30)	C	184	6740	221.40 S	805 1420
Wham 30's	3240	78 Odom-Pachuta	Adj-Inv			C	184	6740	S	805 1420
3# Propanil 200L	3250	4 Plant	Label Change			C	3067	5100	S	807 1420
Wham 5	3260	4 Plant	Adj-Inv			C	3064	5100	S	808 1420
Wham 5	3260	10 B/H	Adj-Inv			C	184	6740	S	808 1420
Wham 5	3260	88 Odom	Adj-Inv			C	184	6740	S	808 1420
4# Bulk	3300	4 Plant	Adj-Inv			C	3069	5100	S	817 1420
4# 35	3340	4 Plant	Donation			C	3069	5100	S	814 1420
4# 35	3340	15 American	Adj-Inv			C	3069	5100	S	814 1420
4# 55's	3310	4 Plant	Label Change			C	3069	5100	S	818 1420
4# 210L	3320	4 Plant	Adj-Inv			C	3069	5100	S	838 1420
Super Wham 30 g	3350	15 American	Adj-Inv			C	3064	5100	S	831 1420
Super Wham 30 g	3350	78 Odom-Pachuta	Adj-Inv			C	184	6740	S	831 1420
Super Wham 30 g	3350	88 Odom	Adj-Inv			C	3064	5100	S	831 1420
Super Wham 2x2.5	3360	10 B/H	Adj-Inv			C	3064	5100	S	834 1420

Adjustments to Inventory (Per physical; samples; etc.):

Product	Item No	Location	Type Adj	Cases/Drums	Gals/Lbs						
Prop Tech	3000	4 Plant	Melted F Tech			C	155	6810	S	702	1420
Flake Tech	3050	4 Plant	Melted F Tech			S	804	1420	C	155	6740
Flake Tech	3050	86 Odom-Waynesboro	Adj to Physical			C	164	6835	S	804	1420
Flaked Tech 25 Kg	3060	86 Odom-Waynesboro	Adj to Physical			C	3053	5100	S	822	1420
Wham 2x2 5	3180	10 B/H	Adj to Physical			C	3084	5100	S	832	1420
Wham 30	3240	10 B/H	Samples			C	964	7700	S	805	1420
Wham 30	3240	86 Odom-Waynesboro	Rework Adjustment	(1,026)	(30,780)	C	964	7700	S	808	1420
Prop 4# 210 L	3320	4 Plant	Adj-Inv			C	3069	5100	S	838	1420
4# 35's	3340	4 Plant	Adj-Inv			C	3069	5100	S	814	1420
4# 35's	3340	10 B/H	Adj-Inv			C	3069	5100	S	814	1420
Super Wham 30	3350	10 B/H	Adj to Physical			C	164	6740	S	831	1420
Super Wham 2x2 5	3360	86 Odom-Waynesboro	Adj-Inv			C	964	7700	S	834	1420
Super Wham 2x2 5	3360	10 B/H	Adj-Inv			C	3064	5100	S	834	1420
Super Wham 2x2 5	3360	86 Odom	Adj-Inv			C	164	6740	S	834	1420
Super Wham Bulk	3370	86 Odom	Adj-Inv			C	164	6740	S	858	1420
Duet 30's	3430	10 B/H	Adj-Inv			C	159	6740	S	823	1420
Duet 30's	3430	78 Odom-Pachuta	Adj-Inv			C	159	6740	S	823	1420
Duet 30's	3430	86 Odom-Waynesboro	Adj-Inv			C	159	6740	S	823	1420
Propanil 360 210L	10020	4 Plant	Repackage			C	3067	5100	S	826	1420
Butox 175 2x2.5	15240	57 HCC-Cordata	Inv Adj			C	410	5100	S	410	1420
Butox 175 2x2.5	15240	10 B/H	Inv Adj			C	410	5100	S	410	1420
Butox 175 2x2.5	15240	20 Gray-Albany	Inv Adj			C	410	5100	S	410	1420
Butox 175 4x1	15260	10 B/H	Inv Adj			C	410	5100	S	410	1420
Butox 175 4x2	15261	12 Cascio	Samples			C	410	7700	S	411	1421
Butox 175 4x1	15260	20 Gray-Albany	Inv Adj			C	410	5100	S	410	1420
Butox 200 2x2.5	15540	10 B/H	For Samples			C	430	7700	S	850	1420
Butox 200 2x2.5	15540	57 HCC-Cordata	Inv Adj			C	430	5100	S	430	1420
Butox 200 2x2 5	15540	20 Gray-Albany	Inv Adj			C	430	5100	S	430	1420
Butox 200 2x2.5	15540	15 American	Inv Adj			C	430	5100	S	430	1420
Butox 200 4x1	15560	57 HCC-Cordata	Inv Adj			C	430	5100	S	430	1420
Butox 7500 DF 10x2 33	15580	20 Gray-Albany	Inv Adj			C	420	5100	S	850	1420
Butox 7500 DF 10x2 33	15580	10 B/H	Samples			C	420	7700	S	850	1420
Butox 7500 DF 10x2 33	15580	31 AWS	Samples	(1)	(23)	C	420	7700	S	850	1420
Ethephon	15740	21 Gray-Ashburn	Set Up Finish Goods			C	187	6740	S	851	1420
Ethephon	15740	78 Odom-Pachuta	Set Up Finish Goods								
Tromethemine Bulk	17000	4 Plant	Adj-Inv			C	3683	5100	S	849	1420
Tromethemine Bulk	17000	31 Meritex	Adj-Inv			C	3683	5100	S	849	1420
Tromethemine 25 Kg	17120	4 Plant	Adj-Inv			C	3683	5100	S	843	1420
Tromethemine 25 Kg	17120	31 Meritex	Samples			C	3683	5100	S	843	1420
Trometamol 50 Kg	17240	4 Plant	Adj-Inv			C	3683	5100	S	847	1420
Tris Ultra Pure 100Kg	17250	4 Plant	Adj-Inv			C	3683	5100	S	853	1420
Pure Tris-Hcl 100Kg	17260	4 Plant	Adj-Inv			C	3683	5100	S	855	1420
Tris Ultra Pure 25Kg	17270	4 Plant	Adj-Inv			C	3683	5100	S	859	1420
Tris Ultra Pure 25Kg	17270	31 Meritex	Adj-Inv			C	163	6740	S	858	1420
TA Mother Liquor	17300	4 Plant	Adj-Inv								
TA Hcl Mother Liquor	17310	4 Plant	Adj-Inv								
TA Chunks	17320	4 Plant	Adj-Inv								
Ultra Pure Samples	17340	4 Plant	Adj-Inv								
DCPI	40150	97 In Transit	Adj to Physical			C	157	5635	S	715	1460
Isophorone	40500	86 Waynesboro	Adj-Inv			C	151	6400	S	717	1460
Isophorone	40500	78 Pachuta	Adj-Inv			C	151	6400	S	717	1460
Dowfax	40700	86 Odom-Waynesboro	Adj to Physical			C	164	5850	S	753	1460
Armul Emulsifier	40900	78 Odom-Pachuta	Adj to Physical			C	168	5675	S	720	1460
Armul Emulsifier	40900	86 Waynesboro	Adj to Physical			C	151	6400	S	720	1460
TM-2 Emulsifier	40910	4 Plant	Adj to Physical			C	151	6400	S	722	1460
Poly Solv	40920	4 Plant	Adj to Physical			C	151	6400	S	723	1460
Soda Ash	41050	4 Plant	Sold			C	151	6400	S	708	1460
Morwet	41460	86 Odom-Waynesboro	Adj to Physical			C	164	5850	S	728	1460
Polyfon O	41470	86 Odom-Waynesboro	Adj to Physical			C	164	5850	S	727	1460
Glycerne	41480	86 Odom-Waynesboro	Adj to Physical			C	164	5850	S	728	1460
Alfonic	41490	86 Odom-Waynesboro	Adj to Physical			C	164	5850	S	729	1460
H58 233	41500	10 B/H	Adj to Physical			C	164	5850	S	737	1460
Kelzan	41510	86 Odom-Waynesboro	Adj to Physical			C	164	5850	S	761	1460
Sulfuric Acid	41520	4 Plant	Actuals used this raw material			C	182	5850	S	762	1460
50% Caustic	41530	4 Plant	Entered under wrong item #			C	151	6400	S	763	1460
Formaldynide	41540	4 Plant	Used out of Vinnings Stock			S	8900	1230	S	764	1460
2,4 D-B Acid	41550	86 Odom-Waynesboro	Adj to Physical			C	410	7700	S	765	1460

Adjustments to Inventory (Per physical; samples; etc.):

Product	Item No	Location	Type Adj	Cases/Drums	Gals/Lbs				
Veegum	41570	86 Odom-Waynesboro	Adj to Physical		C 164 5850		S 731 1460		
60% DMA	41580	57 HCC-Cordale	Adj to Physical		C 410 5700		S 766 1460		
Citric Acid	41590	86 Odom-Waynesboro	Adj to Physical		C 164 5850		S 767 1460		
Citric Acid	41590	57 HCC-Cordale	Adj to Physical		C 164 5850		S 767 1460		
Stapaparse	41600	86 Odom-Waynesboro	PO written under wrong item #		C 164 5850		S 740 1460		
Stapwet	41610	10 B/H	PO written under wrong item #		C 164 5850		S 743 1460		
Cont'l Clay	41620	10 B/H	Adj to Physical		C 164 5850		S 748 1460		
Morpholine	41630	4 Plant	Adj-Water Treatment		C 151 6400		S 768 1460		
Carbaryl Tech	41670	86 Odom-Waynesboro	Adj to Physical		C 164 5850		S 757 1460		
Ekhephon	41680	21 Gray-Ashburn	Set Up Finish Good				S 791 1460		
Ekhephon	41680	78 Odom-Pachuta	Set Up Finish Good		C 187 5910		S 791 1460		
Ekhephon	41680	86 Odom-Waynesboro	Adj-Inv		C 186 5710		S 791 1460		
Soprophor	41690	86 Odom-Waynesboro	Adj-Inv		C 164 5850		S 809 1460		
Ucaride	41750	86 Odom-Waynesboro	Adj-Inv		C 164 5850		S 827 1460		
Drums 30 plastic	42100	86 Odom-Waynesboro	Adj to Physical		(1) C 164 5870	15 85	S 762 1460	(15 85)	
Drums 30 plastic	42100	4 Plant	Adj - Used for labeling practice		C 164 5870		S 762 1460		
Drums 30 plastic	42100	78 Odom-Pachuta	Adj to Physical		C 164 5870	20	S 752 1460	317 00	
Drums 30 plastic	42100	10 B/H	Adj to Physical		C 164 5870		S 762 1460		
35 mt's	42210	4 Plant	Adj-Inv		C 1069 5890		S 738 1460		
55 mt black	42300	78 Odom-Pachuta	Adj to Physical		C 1068 5890		S 742 1460		
55 mt Crystal	42560	4 Plant	Adj-Inv		S 4 1230		S 756 1460		
Methanol	42640	4 Plant	Clean Out Tank		C 186 6400		S 735 1460		
Hcl	42670	4 Plant	Adj-Inv		C 151 6400		S 756 1460		
Nitromethane	42680	4 Plant	Adj-Inv		C 183 5850		S 787 1460		
Raney Nickel	42690	4 Plant	Adj-Inv		C 183 5850		S 788 1460		
Sodium Hypo	42610	4 Plant	Sent to Ponds		C 151 6400		S 789 1460		
Hydroxamine Sulfate	42650	4 Plant	Adj to Physical		C 151 6400		S 736 1460		
Jugs 1	44100	20 Gray-Albany	Adj-Inv	7,017	C 410 5870	(3,017.31)	S 749 1460	3,017 31	
Jugs 1	44100	57 HCC-Cordale	Adj-Inv	(8,387)	C 410 5870	3,608 41	S 749 1460	(3,608 41)	
Jugs 2.5	44200	20 Gray-Albany	Adj-Inv	(183)	C 410 5870	248 88	S 759 1460	(248 88)	
Jugs 2.5	44200	57 HCC-Cordale	Shipped per Stanley	7,357	C 410 5870	(10,005.52)	S 759 1460	10,005.52	
Jugs 2.5	44200	86 Odom-Waynesboro	Adj to Physical		C 164 5870		S 759 1460		
Jugs 2.5	44200	78 Odom-Pachuta	Adj to Physical		C 164 5870		S 759 1460		
Antifoam AF 1500	45000	4 Plant	Transfer to Vinning Stock		S 8900 1230		S 770 1460		
DMPA	45020	4 Plant	Transfer to Vinning Stock		S 8900 1230		S 772 1460		
GMS	45030	4 Plant	Used out of Vinnings Stock		S 8900 1230		S 773 1460		
Metacure T-1	45040	4 Plant	Transfer to Cedar Stock		S 8900 1230		S 774 1460		
20% Rayon Caustic	45080	4 Plant	Transfer to Cedar Stock		S 8900 1230		S 779 1460		
50% Rayon Caustic	45090	4 Plant	Entered under wrong item #		C 151 6400		S 792 1460		
50% Rayon Caustic	45090	4 Plant	Adj to Physical		C 151 6400		S 792 1460		
Arquad	45100	86 Odom-Waynesboro	Adj to Physical		C 158 5850		S 781 1460		
Arquar	45120	86 Odom-Waynesboro	Adj to Physical		C 158 5850		S 783 1460		
Ingalite Blue	45130	86 Odom-Waynesboro	Adj to Physical		C 158 5850		S 784 1460		
DC 1500 Antifoam	45140	86 Odom-Waynesboro	Samples		C 164 5850		S 785 1460		
55 mt	45150	86 Odom-Waynesboro	Adj to Physical		C 1068 5890		S 786 1460		
55 mt	45150	78 Odom-Pachuta	Adj to Physical		C 151 6400		S 786 1460		
Butachlor	45200	86 Odom-Waynesboro	Adj to Physical		C 151 6400		S 794 1460		
Butachlor	45200	78 Odom-Pachuta	Adj to Physical		C 151 6400		S 794 1460		
Cans 5 gal mt's	42000	4 Plant	Adj to Physical		C 151 6400		S 739 1460		

				Lbs/Gls				
Misc Activity:								
Platinum Purchased:								
Platinum	41040	97 In-Transit	Purchased	160				
Platinum	41040	97 In-Transit	Used	64				
DCPI Purchased:								
DCPI	40150	97 In-Transit	Purchased R-P	S	715	1460	S	2 1590
ODCB	41000	97 In-Transit	Used R-P	S	2	1590	S	703 1460
Diuron Purchased:								
Diuron	3030	97 In-Transit	Purchased EMV	C	157	5910	S	3 1590
Diuron	3030	97 In-Transit	Transfer to Inventory	S	816	1420	C	157 6740
DCA	3020	97 In-Transit	Used EMV	S	3	1590	S	701 1420
DCA Purchased:								
DCA	3020	97 In-Transit	Purchased Beesterfeld	C	153	5910	S	4 1590
DCA	3020	97 In-Transit	Purchased Rhons-Poulenc	C	153	6910	S	4 1590
DCA	3020	97 In-Transit	Transfer to Inventory	S	701	1420	C	153 6740
ODCB	41000	97 In-Transit	Used R-P	S	4	1590	S	703 1460
ODCB Purchased								
	41000	97 In-Transit						
Mollinate Tech Purchased								
	41760	97 In-Transit	Purchased EMV	227,404				

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Finish Goods Standards:

Product	Item No	Unit	Per Unit	
Propanil Tech Bulk	3000	lbs	1.01	
DCA-Cedar	3020	lbs	1.02	
Diuron	3030	lbs	2.78	
Diuron B Grade	3040	lbs	2.78	
Flaked Tech	3050	lbs	1.05	
Flaked Tech 25Kg	3060	kg	2.82	
Diuron Col 224 Kg	3070	kg	4.10	
RiceSolo 30 Gal	3080	gls	15.82	
55% Blend	3100	lbs	1.01	
RiceSolo Bulk	3130	gls	15.27	
Wham DF (80%) 40#	3150	lbs		1.70
WhamI EZ 2x2 5 Gal	3180	gls	7.38	
3# 50 Liter	3180	Lt	1.79	
Propanil 3# bulk	3200	gls	6.11	
Propanil 3# 55 gal	3210	gls	6.79	
Propanil 3# 20L	3220	Lt	1.79	
Wham 100 Liter	3230	Lt	1.95	
Wham 30 gal	3240	gls	7.38	
Propanil 3# 200L	3250	Lt	1.79	
Wham 5 gal	3260	gls	7.38	
Wham 80% 50#	3270	lbs		1.70
Propanil 4# 20L	3280	Lt	2.05	
Propanil 4# Bulk	3300	gls	6.89	
Propanil 4# 55 gal	3310	gls	7.75	
Propanil 4# 210 L	3320	Lt	2.05	
Propanil 4# 200L	3330	Lt	2.05	
Propanil 4# 35 gal	3340	gls	7.75	
Super WhamI 30 gal	3350	gls	7.38	
Super WhamI 2x2.5 Gal	3360	gls	7.38	
Super Wham Bulk	3370	gls	6.86	
Stam Bulk	3400	gls	7.31	
Stam 35 gal	3420	gls	7.80	
Duet	3430	gls	7.33	
Trisamino Alcohol	5340	lbs	3.77	
Propanil 360 210 L	10020	Lt	1.79	
Butox 200 Bulk	15200	gls	10.25	
Butox 175	15240/15260	gls	10.80	
Butox 200	5530/15540/1556	gls	12.28	
Butoxone 7500 DF	15580	Bag	13.65	
Butoxone 7500 DF	15590	Bulk	1.85	
Ethephon	15740	lbs	1.24	
Tromethamine Bulk	17000	lbs	3.77	
Tham 25 Kg	17020	kg	8.31	3.77 lb
Pure Tromethamine 25 Kg	17120	kg	8.31	3.77 lb
Tromethamol 25 Kg	17220	kg	18.50	8.39 lb
Pure Tromethamine 50 Kg	17230	kg	8.31	3.77 lb
Tromethamol 50 Kg	17240	kg	18.50	8.39 lb
Tris Ultra Pure 100 Kg	17250	kg	18.12	8.22 lb
Pure Tris-Hcl 100 Kg	17260	kg	18.12	8.22 lb
Tris Ultra Pure 25 Kg	17270	kg	23.04	10.45 lb

R/M's Standard:

Product	Item No	Unit	Per Unit
DCA	40100	lbs	1.05
DCPI	40150	lbs	2.38
P Acid	40200	lbs	24
P Anhydr	40300	lbs	82
MO	40400	lbs	59
Isophor	40500	lbs	56
Emul	40600	lbs	70
Emul C6173	40610	lbs	.70
Dowfax 3B2	40700	lbs	7.52
Tenn 500	40800	lbs	.15
Armud	40900	lbs	78
TM-2 Emulsifier	40910	lbs	1.65
PolySol	40920	lbs	.71
MCPA-IOE	40930	lbs	1.78
ODCB	41000	lbs	37

R/M's Standard	Item No	Unit	Per Unit
Product			
Sulfuric Acid	41010	lbs	.04
Nitric Acid	41020	lbs	.16
Hydrogen	41030	lbs	1.20
Platinum	41040	tr ozs	393.00
Soda Ash	41050	lbs	.13
Lime	41060	lbs	.07
Pist Cat	41070	lbs	68.00
Isoph/Mibk	41080	lbs	.52
Hydrogen Peroxide	41090	lbs	.23
Xylene (Cedar)	41200	lbs	.19
Mibk	41300	lbs	.47
Vangel	41450	lbs	1.37
Morewet	41460	lbs	1.08
Polyfon	41470	lbs	.62
Glycer	41480	lbs	.45
Alfonic	41490	lbs	.78
Hi Sil	41500	lbs	.83
Kelzan	41510	lbs	5.30
Sulfuric Acid 93%	41520	lbs	.04
Caustic 50%	41530	lbs	.06
Formaldehyde	41540	lbs	.11
2,4 D-B Acid	41550	lbs	2.00
Carbon Bisulfide	41560	lbs	.28
Veegum	41570	lbs	1.85
60% DMA	41580	lbs	.60
Citric Acid	41590	lbs	.92
Step-spense DF 200	41600	lbs	1.27
Stepwet DF 95	41610	lbs	2.48
Continental Clay	41620	lbs	.06
Morpholine	41630	lbs	1.06
Sun 7N Oil	41640	lbs	.16
Anhydrous DMA	41650	lbs	.64
High Ounty Heptane	41660	lbs	.21
Technical Carbonyl	41670	lbs	3.75
Ethephon	41680	lbs	3.37
Sorprophor 4d384	41690	lbs	1.87
Mixed Nitrating Acid	41700	lbs	.11
Acetic Anhydride	41710	lbs	.38
Ethylene Dichloride	41720	lbs	.22
Proxel GXL	41730	lbs	5.12
Perkione D	41740	lbs	.33
Ucaricide	41750	lbs	2.50
Mollinate	41760	lbs	2.80
5 gal/20 L Pts	42000	ea	3.85
30 Mts	42100	ea	15.85
Stam 35	42200	ea	17.80
35 mts	42210	ea	18.50
35 mts Plastic/Stam	42220	ea	15.00
35 mts Plastic/Prop	42230	ea	15.00
55 mts	42300	ea	22.05
55 mts Plastic	42500	ea	22.50
55 mts Crystal Litho	42550	ea	21.60
MTPO Drums	42600	ea	25.55
Sodium Hypo	42810	lbs	.08
Caustic 30%	42820	lbs	.07
Methal Mercaptan	42630	lbs	.78
Methanol 99%	42640	lbs	.07
Hydroxamine Sulfate	42650	lbs	1.00
Caustic 17%	42680	lbs	.03
Hydrochloric Acid	42670	lbs	.05
Nitromethane 99.5%	42680	lbs	1.38
Nickel Catalyst	42890	lbs	7.83
DMA 40% Solution	42700	lbs	.47
Unipacks	44000	ea	2.88
Jugs-1 Gal Plastic	44100	ea	.43
Jugs-2.5 Gal Plastic	44200	ea	1.38
Antifoam AF 9000	45000	lbs	9.60
Acetone	45010	lbs	.35

R/M's Standard.	Item No	Unit	Per Unit
Product			
Dimethylolpropione	45020	lbs	2.83
Glycerol Monostearate	45030	lbs	.71
Metacure T-1 Catalyst	45040	lbs	12.28
Methyldiethanolamine	45050	lbs	2.15
Proxel GXL Biocide	45060	lbs	5.20
Toluene Diisocyanate	45070	lbs	1.33
20% Rayon Grade Caustic	45080	lbs	.11
50% Caustic	45090	lbs	.08 (Old Rayon Grade)
Arquad 18/29	45100	lbs	1.15
Arquar 2C75	45120	lbs	1.85
Irgalite Blue dye	45130	lbs	13.55
DC 1500 Antifoam	45140	lbs	6.30
Drum 55 gal Diuron Col	45150	ea	44.95
Butachlor	45200	lbs	2.35
Sodium Cyanide	45300	lbs	.90
TEAB	45310	lbs	3.90
Tenneco 500/100	45320	lbs	.18
36% Hcl	45330	lbs	.10
Toluene	45340	lbs	.15
Rock Salt	45350	lbs	.19
Thionyl Chloride	45360	lbs	0.70
DMF	45370	lbs	0.95
Granular Salt	45380	lbs	0.12
55 mt Drums (Cyper)	45390	lbs	29.50
2-4 DB Acid 95%	46000	kg	2.55
Metsulfuron Methyl 80%	46010	kg	118.50
Acido Propionico Puro	46020	kg	1.27
Acido Propionico Usado	46030	kg	1.27
Dicloroanilina 98%	46040	kg	3.00
Propanil Tech	46050	kg	3.08
Criston 34	46060	kg	2.26
Criston 180	46070	kg	2.48
Acete Banano	46080	kg	0.11
Osido Mestilico	46090	kg	2.08
Tolueno	46100	kg	0.79
Anhydrous Hydr Chloride	46200	lbs	0.70
Ethylene Oxide	46210	lbs	0.42
Phosphorus Trichloride	46220	lbs	0.42

Aventis Cyclolide in Unit 5---2,4-DCA Whole Drum Charge
Heat & Mass Balance

Assumptions:

- | | |
|---|--|
| 1. Average Rate @ 65% Overall O.S.T. | 6. All Yield calculations based on DCA |
| 2. 0.5% Material Loss through centrifugation | 7. --- |
| 3. Centrifuge discharge @ 20% LOD | 8. --- |
| 4. Centrifugation Cycle=1.25 hours @ 300 lb./piow | 9. --- |
| 5. Vac. Dryer discharge at 0.5% LOD | 10. --- |

SUMMARY OF RESULTS

Instantaneous Rate

Final Product (lb/day)	2,146.8
Final Product (kg/day)	973.4
Final Product (MT/day)	0.97
Average Rate @ 65% OAST	
Final Product (lb/day)	2,146.8
Final Product (kg/day)	973.4
Final Product (MT/day)	0.97

Stream No.		R-4 Charge	CPDM Charge	NaOCH3 Charge	MeOH Strip	Coupling Water Charge	Intermed Xferred to R-1	Hydroly's Water Charge	R-1 Hydr. Intermediate	MeOH Distilla'n	Intermed. Xferred to R-3 (AQ)	Hydrol. Org. Phase to Rec'y
Component	MW											
Raw Materials												
CPDM	158.10		2,146.8									
2,4 DCA	162.02	2,200.0										
NaOCH3	54.02			670.8								
MeOH	32.00			1,585.1								
H2O	18.00					6,222.7	6,222.7	2,921.3	9,144.0		9,144.0	
NaOH	40.00											
Formic Acid	46.03											
Xylene	106.17	7,982.8			23.8		7,959.0		7,959.0			7,959.0
(By) Products												
Na-CPMPA	310.10						4,000.2					
MeOH	32.00				2,359.8				412.8	412.8		
Na-RPA 90946	296.10								3,628.6		3,628.6	
RPA 90946	274.10											
NaCHO2	68.01											
Others	---											
Stream Weight, lb/batch		10,182.8	2,146.8	2,235.9	2,383.6	6,222.7	18,181.8	2,921.3	21,144.4	412.8	12,772.6	7,959.0
Stream Volume, gal (ft3)		1,313.0	224.7	223.7	361.2	747.0	2,352.7	350.7	2,762.5	62.6	1,580.7	1,099.5
Temperature, °F		77.0	104.0	140.0	146.3	145.0	145.0	140.0	77.0	212.0	68.0	77.0
Pressure, psia (torr)		14.7	(180)	(180)	(180)	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.93	1.15	1.20	0.79	1.00	0.93	1.00	0.92	0.79	0.97	0.87
Viscosity, cP (cSt)												
Molar Yield (Overall)							95.0%		95.0%			
Vessel Nominal Volume, gal (ft3):		2,870.0	2,870.0	2,870.0			2,870.0		3,500.0		3,000.0	17,000.0
Vessel Filled Level (%):		46%	54%	61%			82%		78.9%		53%	6%

Heat & Mass Balance

Assumptions:

1. Average Rate @ 65% Overall O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=1.25 hours @ 300 lb./pl
5. Vac. Dryer discharge at 0.5% LOD

Stream No.												
Description		R-3 Acid Charge	Precipit'd Prod't to Centrif.	Centrif. Wash Water	M/L Disch. To T-5208	Centrif'd Mat'l to Holoflgt	Holoflgt Dryer Disch	Holoflgt Vent Disch	Wet Prod't to Dryer	Vac Dryer Vent Disch	Dried Final Product	Xylene to Recycle
Component	MW											
Raw Materials												
CPDM	158.10											
2,4 DCA	162.02											
NaOCH3	54.02											
MeOH	32.00											
H2O	18.00	100.9	9,144.0	6,030.7	14,380.9	793.8	785.8	7.9	785.8	770.1	15.7	1.2
NaOH	40.00											
Formic Acid	46.03	571.8										
Xylene	106.17											7,959.0
(By) Products												
Na-CPMPA	310.10											
MeOH	32.00											
Na-RPA 90946	296.10											
RPA 90946	274.10		3,191.1			3,175.1	3,143.3		3,143.3		3,127.6	
NaCHO2	68.01		844.4		844.4							
Others	---											158.8
Stream Weight, lb/batch		672.4	13,179.5	6,030.7	15,225.4	3,968.9	3,929.2	7.9	3,929.2	770.1	3,143.3	8,118.9
Stream Volume, gal (ft3)		68.4	1,631.1	724.0	1,740.7	453.8	449.2	0.9	{105.11}	92.5	{126.14}	1,124.6
Temperature, °F		77.0	68.0	68.0	68.0	68.0	68.0	68.0	212.0	212.0	212.0	68.0
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		1.18	0.97	1.00	1.05	1.05	1.05	1.05	{37.4}	{1.00}	{24.9}	0.87
Viscosity, cP (CSt)												
Molar Yield (Overall)			95.0%								{85.7%}	
Vessel Nominal Volume, gal (ft3):			4,000.0	4,000.0	30,000.0				{240.0}	500.0	{240.0}	4,000.0
Vessel Filled Level (%):			41%	18%	6%				44%	18%	53%	28%

Aventis Cyllide in Unit 5—2,
Heat & Mass Balance

Assumptions:

1. Average Rate @ 65% Overall O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=1.25 hours @ 300 lb./pi
5. Vac. Dryer discharge at 0.5% LOD

Stream No.												
Description		Recycled Xylene	Water to Recycle	Forerun Cut to Org Waste	Recycled Water	Organic Waste	Salt Waste					
Component	MW											
Raw Materials												
CPDM	158.10											
2,4 DCA	162.02											
NaOCH ₃	54.02											
MeOH	32.00			25.0		25.0						
H ₂ O	18.00		15,166.8	200.0	14,993.8	1.2	173.0					
NaOH	40.00		1,136.8									
Formic Acid	46.03											
Xylene	106.17	6,337.2		30.0		1,621.8						
(By) Products												
Na-CPMPA	310.10											
MeOH	32.00					2,772.6						
Na-RPA 90946	296.10											
RPA 90946	274.10											
NaCHO ₂	68.01		844.4				844.4					
Others	---					158.8						
Stream Weight, lb/batch		6,337.2	17,148.0	255.0	14,993.8	4,579.3	1,017.4					
Stream Volume, gal (ft³)		877.8	1,906.1	38.3	1,800.0	671.0	{14.20}					
Temperature, °F		75.0	68.0	68.0	68.0	68.0	68.0					
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7					
Density, g/cc (lb/ft³)		{0.87}	1.08	0.80	1.00	0.82	{71.65}					
Viscosity, cP {CSt}												
Molar Yield (Overall)												
Vessel Nominal Volume, gal (ft³):			9,000.0			5,000.0	{27.0}					
Vessel Filled Level (%):			21%			13%	53%					

Aventis Cyclanilide in Unit 5---2,4-DCA Whole Drum Charge

Cycle Time Analysis

		Step Cycle Time	Vessel Cycle Time	
Coupling Reaction (R-5104)	Press/Vac Test	1.0		
	Charge DCA	<u>0.8</u>		
	Charge Xylene	<u>0.9</u>		
	Heat to 40°C	0.5		
	Charge CPDM	<u>0.8</u>		
	Draw Vacuum	0.3		
	Heat to 60°C	0.8		
	Charge Na Methoxide	2.5		
	Distill MeOH/Xylene	<u>1.9</u>		
	Charge Water	<u>0.6</u>		
	Stir/Settle	1.5		
	Transfer to Hydrolysis Rxt	<u>1.0</u>		
			Σ =	12.6
Hydrolysis Reaction (R-5101)	Charge Water	<u>0.4</u>		
	Draw Vacuum	0.7		
	Heat/Reflux	3.0		
	Distill MeOH	3.0		
	Phase Separate / Transfer	2.0		
			Σ =	9.0
Precipitation (R-5103)	Charge Formic Acid	1.5		
	Mix	1.0		
	Sample/Results	0.8		
	Transfer	<u>1.4</u>		
			Σ =	6.0
Isolation (V-5312, CF-5701, D-5700)	Centrifuge Batch	<u>16.5</u>		
			Σ =	16.5 (240 lb/hr)
Drying/Packaging (D-7100)	Charge <u>2</u> batches	2.0		
	Dry Batch	18.0		
	Packout	2.0		
			Σ =	11.0 (allocated time/batch)

Rate Limiting
Vessel Time
16.5 hours

Total Time for Batch: 55.2 hours
(Charge to Packout)

Notes:

nn.n indicates calculated value,
otherwise value is estimated



Internal Correspondence

To: G. Pratt
CC: C. McGee, J. Rone
From: David C. Guffey
Date: 04 January 2000
RE: Estimated Cyclanilide 90946 Waste Costs

Per P. Fields telephone conversation on 4th January 2000, the estimated waste cost for Cyclanilide Organic Waste is \$0.25/lb and for Aqueous Waste is \$0.30/gal (assuming the COD loading is too great for our ponds).

For the latest material balance (attached) these numbers correspond to \$0.461/lb Cyclanilide Organic and \$0.039/lb Cyclanilide Aqueous for a total waste cost of \$0.500/lb Cyclanilide (~~\$0.227/lb~~ kg Cyclanilide). Note that all references to Cyclanilide are for dried final product.

Please feel free to contact me with further questions, comments, etc.

Regards.

Post-It® Fax Note	7671	Date	1/4/00	# of pages	04
To	GEOFF PRATT		From	D.C. GUFFEY	
Co /Dept.			Co.		
Phone #			Phone #		
Fax #			Fax #		

Rhone Poulenc RPA 90946 (Cyclanilide)--DeGussa-Huls Technology Basis
Heat & Mass Balance

Assumptions:

- | | |
|---|---|
| 1. Process overall 80% O.S.T. | 6. All Yield calculations based on CPDM |
| 2. 0.5% Material Loss through centrifugation | 7. --- |
| 3. Centrifuge discharge @ 20% LOD | 8. --- |
| 4. Centrifugation Cycle=45 minutes @ 400 lb./plow | 9. --- |
| 5. Dryer discharge at 0.5% LOD | 10. --- |

Summary of Results

Final Product lb/bx:	1,947 lb
Limiting Cycle Time:	15.0 hours
Final Product lb/day:	3,111 lb/day
Final Product MT/day:	1.4 MT/day
Producty @ 2 Trains:	2.8 MT/day

		R-1	R-2	R-3					R-4			
Stream No.		1	2	3	4	5	6	7	8	9	10	11
Description		Premix Initial Charge	R-2 Charge + Premix	MeOH-Tol Azeo Strip	R-2 Water Charge	Intermed Xferred to R-3	R-3 Water Charge	R-3 Hydr. Intermedia te	MeOH Distillat'n	Intermed. Xferred to R-4	Hydrol. Org. Phase to Rec'y	R-4 Acid Charge
Component	MW											
Raw Materials												
CPDM	158.10		1,411.0									
2,4 DCA	162.00	1,411.0	1,411.0									
NaOCH3	54.00		533.3									
MeOH	32.00		1,244.5									
H2O	18.00				3,703.8	3,703.8	3,351.0	7,054.8		7,054.8		
NaOH	40.00							143.0				
Formic Acid	46.03											705.5
Toluene	92.15	2,116.4	7,231.2	711.8		6,519.4		6,519.4			6,519.4	
(By) Products												
Na-CPMPA	310.10					2,767.5						
MeOH	32.00			1,876.6				285.6	285.6			
Na-RPA 90946	296.10							2,642.5		2,642.5		
RPA 90946	274.10											
NaCHO2	68.01											
Others	—											
Stream Weight, lb/batch		3,527.4	11,830.9	2,588.4	3,703.8	12,990.6	3,351.0	18,645.2	285.6	9,697.3	6,519.4	705.5
Stream Volume, gal (ft3)		488.5	1,502.9	382.6	444.6	1,834.7	402.3	2,060.0	43.3	1,200.1	900.6	71.8
Temperature, °F		77.0	77.0	146.3	68.0	148.5	230.0	77.0	212.0	68.0	77.0	77.0
Pressure, psia (torr)		14.7	14.7	{400}	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc (lb/ft3)		0.87	0.95	0.81	1.00	0.85	1.00	0.97	0.79	0.97	0.87	1.18
Viscosity, cP (cSt)												
Molar Yield (Overall)												

Rhone Poulenc RPA 90946 (Cycl.
Heat & Mass Balance

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./p
5. Dryer discharge at 0.5% LOD

		R-5	CF	Dryer	Packout	Solvent Recovery		Water Recovery		Waste Streams	
Stream No.		12	13	14	15	16	17	18	19	XX	XX
Description		Precipit'd R-4 Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Toluene to Recycle	Recycled Toluene	Water to Recycle	Recycled Water	Organic Waste	Aqueous Waste
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH ₃	54.00										
MeOH	32.00										
H ₂ O	18.00	7,054.8	7,369.3	733.9	12.2	10.4		8,103.2	6,721.5	10.4	1,381.7
NaOH	40.00										
Formic Acid	46.03										
Toluene	92.15					6,519.4	5,320.8			1,198.6	
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00									2,162.2	
Na-RPA 90946	296.10										
RPA 90946	274.10	2,446.2		2,434.0	1,947.2						
NaCHO ₂	68.01	1,042.3	1,042.3					1,042.3			1,042.3
Others	—					0.0				243.4	
Stream Weight, lb/batch		10,543.3	8,411.6	3,167.8	1,959.3	6,529.8	5,320.8	9,145.5	6,721.5	3,614.6	2,424.0
Stream Volume, gal {ft ³ }		1,304.8	981.7			904.5	737.0	1,016.6	806.9	529.9	253.0
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0	68.0	68.0
Pressure, psia {torr}		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc {lb/ft ³ }		0.97	1.05			0.87	0.87	1.08	1.00	0.82	1.15
Viscosity, cP {cSt}											
Molar Yield {Overall}											

Rhone Poulenc RPA 90946 (Cyclanilide)—DeGussa-Huls Technology Basis
Cycle Time Analysis

Cycle Time Analysis		Step Cycle Time	Vessel Cycle Time	Rate Limiting Time 15.0 hours
Premix Prep (R-1)	Charge Toluene	0.1	Σ = 1.3	
	Charge 2,4 DCA	0.7 [Drum]		
	Mix/Hold	0.5		
Coupling Reaction (R-2)	Charge Premix	0.3	Σ = 8.6	
	Draw Vacuum	0.3		
	Heat to 56-59°C	0.8		
	Charge Na Methoxide	3.0		
	Distill MeOH/Toluene Azeotrope	2.0		
	Cool to 60-65°C	1.0		
	Charge Water	0.2		
	Transfer to Hydrolysis Rxtr	1.0		
Hydrolysis Reaction (R-3)	Charge Water	1.0	Σ = 15.0	
	Heat/Reflux	5.0		
	Distill MeOH	1.0		
	Cool Rxtr <50°C	1.0		
	Sample/NaOH Adjust	5.0		
	Phase Separate / Transfer	2.0		
Acidification (R-4)	Cool >25°C	1.0		
	Charge Formic Acid	3.0		
	Mix	0.5		
	Sample/Results	0.5		
	Transfer	0.5		
Centrifugation (R-5)	Centrifuge Batch	4.6	Σ = 14.7	
Drying	Charge 1.5 batches	1.0	Σ = 10.5	
	Dry Batch	8.0		
	Packout	1.5		
Note:				
nn.n indicates calculated value, otherwise value is estimated		Total Batch Time Req'd	50.1	hours

Confirmation Report-Memory Send

Time : Jan-04-00 11:27
Tel line 1 : +8705723795
Name : CEDAR CHEMICAL

Job number : 415
Date : Jan-04 11:22
To : 19016845398
Document Pages : 04
Start time : Jan-04 11:22
End time : Jan-04 11:27
Pages sent : 04

Job number : 415

*** SEND SUCCESSFUL ***



Internal Correspondence

To: G Pratt
CC: C. McGee, J. Rana
From: David C. Guffey
Date: 04 January 2000
RE: Estimated Cyclanilide 90946 Waste Costs

Per P. Fields telephone conversation on 4th January 2000, the estimated waste cost for Cyclanilide Organic Waste is \$0.25/lb and for Aqueous Waste is \$0.30/gal (assuming the COD loading is too great for our ponds).

For the latest material balance (attached) these numbers correspond to \$0.461/lb Cyclanilide Organic and \$0.039/lb Cyclanilide Aqueous for a total waste cost of \$0.500/lb Cyclanilide (\$0.227/kg Cyclanilide). Note that all references to Cyclanilide are for dried final product.

Please feel free to contact me with further questions, comments, etc.

Regards,

Post-it® Fax Note	7871	Date	1/4/00	Page	04
To	GEOFF PRATT				
Co/Dept	D.C. GUFFEY				
Phone #	Phone #				
Fax #	Fax #				



F.I.

Internal Correspondence

To: G. Pratt
CC: C. McGee, J. Rone
From: David C. Guffey
Date: 04 January 2000
RE: Estimated Cyclanilide 90946 Waste Costs

Per P. Fields telephone conversation on 4th January 2000, the estimated waste cost for Cyclanilide Organic Waste is \$0.25/lb and for Aqueous Waste is \$0.30/gal (assuming the COD loading is too great for our ponds).

For the latest material balance (attached) these numbers correspond to \$0.461/lb Cyclanilide Organic and \$0.039/lb Cyclanilide Aqueous for a total waste cost of \$0.500/lb Cyclanilide (\$0.227/kg Cyclanilide). Note that all references to Cyclanilide are for dried final product.

Please feel free to contact me with further questions, comments, etc.

Regards.

Rhone Poulenc RPA 90946 (Cyclanilide)—DeGussa-Huls Technology Basis
Heat & Mass Balance

Assumptions:

- | | |
|---|---|
| 1. Process overall 80% O.S.T. | 6. All Yield calculations based on CPDM |
| 2. 0.5% Material Loss through centrifugation | 7. --- |
| 3. Centrifuge discharge @ 20% LOD | 8. --- |
| 4. Centrifugation Cycle=45 minutes @ 400 lb./plow | 9. --- |
| 5. Dryer discharge at 0.5% LOD | 10. --- |

Summary of Results

Final Product lb/bx:	1,947 lb
Limiting Cycle Time:	15.0 hours
Final Product lb/day:	3,111 lb/day
Final Product MT/day:	1.4 MT/day
Producty @ 2 Trains:	2.8 MT/day

		R-1	R-2	R-3									R-4	
Stream No.		1	2	3	4	5	6	7	8	9	10	11		
Description		Premix Initial Charge	R-2 Charge + Premix	MeOH-Tol Azeo Strip	R-2 Water Charge	Intermed Xferred to R-3	R-3 Water Charge	R-3 Hydr. Intermediate	MeOH Distillat'n	Intermed. Xferred to R-4	Hydrol. Org. Phase to Rec'y	R-4 Acid Charge		
Component	MW													
Raw Materials														
CPDM	158.10		1,411.0											
2,4 DCA	162.00	1,411.0	1,411.0											
NaOCH3	54.00		533.3											
MeOH	32.00		1,244.5											
H2O	18.00				3,703.8	3,703.8	3,351.0	7,054.8		7,054.8				
NaOH	40.00							143.0						
Formic Acid	46.03											705.5		
Toluene	92.15	2,116.4	7,231.2	711.8		6,519.4		6,519.4			6,519.4			
(By) Products														
Na-CPMPA	310.10					2,767.5								
MeOH	32.00			1,876.6				285.6	285.6					
Na-RPA 90946	296.10							2,642.5		2,642.5				
RPA 90946	274.10													
NaCHO2	68.01													
Others	—													
Stream Weight, lb/batch		3,527.4	11,830.9	2,588.4	3,703.8	12,990.6	3,351.0	16,645.2	285.6	9,697.3	6,519.4	705.5		
Stream Volume, gal (ft3)		488.5	1,502.9	382.6	444.6	1,834.7	402.3	2,060.0	43.3	1,200.1	900.6	71.8		
Temperature, °F		77.0	77.0	146.3	68.0	148.5	230.0	77.0	212.0	68.0	77.0	77.0		
Pressure, psia (torr)		14.7	14.7	{400}	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7		
Density, g/cc (lb/ft3)		0.87	0.95	0.81	1.00	0.85	1.00	0.97	0.79	0.97	0.87	1.18		
Viscosity, cP (cSt)														
Molar Yield (Overall)														

**Rhone Poulenc RPA 90946 (Cycl:
Heat & Mass Balance**

Assumptions:

1. Process overall 80% O.S.T.
2. 0.5% Material Loss through centrifugation
3. Centrifuge discharge @ 20% LOD
4. Centrifugation Cycle=45 minutes @ 400 lb./p
5. Dryer discharge at 0.5% LOD

		R-5	CF	Dryer	Packout	Solvent Recovery		Water Recovery		Waste Streams	
Stream No.		12	13	14	15	16	17	18	19	XX	XX
Description		Precipit'd R-4 Prod't to Centrif.	Wash + ML Disch.	Wet Prod't to Dryer	Dried Final Product	Toluene to Recycle	Recycled Toluene	Water to Recycle	Recycled Water	Organic Waste	Aqueous Waste
Component	MW										
Raw Materials											
CPDM	158.10										
2,4 DCA	162.00										
NaOCH ₃	54.00										
MeOH	32.00										
H ₂ O	18.00	7,054.8	7,369.3	733.9	12.2	10.4		8,103.2	6,721.5	10.4	1,381.7
NaOH	40.00										
Formic Acid	46.03										
Toluene	92.15					6,519.4	5,320.8			1,198.6	
(By) Products											
Na-CPMPA	310.10										
MeOH	32.00									2,162.2	
Na-RPA 90946	296.10										
RPA 90946	274.10	2,446.2		2,434.0	1,947.2						
NaCHO ₂	68.01	1,042.3	1,042.3					1,042.3			1,042.3
Others						0.0				243.4	
Stream Weight, lb/batch		10,543.3	8,411.6	3,167.8	1,959.3	6,529.8	5,320.8	9,145.5	6,721.5	3,614.6	2,424.0
Stream Volume, gal {ft ³ }		1,304.8	961.7			904.5	737.0	1,016.6	806.9	529.9	253.0
Temperature, °F		68.0	68.0	212.0	212.0	68.0	75.0	68.0	68.0	68.0	68.0
Pressure, psia (torr)		14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
Density, g/cc {lb/ft ³ }		0.97	1.05			0.87	0.87	1.08	1.00	0.82	1.15
Viscosity, cP {cSt}											
Molar Yield {Overall}											

Rhone Poulenc RPA 90946 (Cyclanilide)—DeGussa-Huls Technology Basis
Cycle Time Analysis

		Step Cycle Time	Vessel Cycle Time	Rate Limiting Time 15.0 hours
Premix Prep (R-1)	Charge Toluene	<u>0.1</u>	$\Sigma =$ 1.3	
	Charge 2,4 DCA	<u>0.7</u> [Drum]		
	Mix/Hold	0.5		
Coupling Reaction (R-2)	Charge Premix	<u>0.3</u>	$\Sigma =$ 8.6	
	Draw Vacuum	0.3		
	Heat to 56-59°C	0.8		
	Charge Na Methoxide	3.0		
	Distill MeOH/Toluene Azeotrope	2.0		
	Cool to 60-65°C	1.0		
	Charge Water	0.2		
	Transfer to Hydrolysis Rxtr	1.0		
Hydrolysis Reaction (R-3)	Charge Water	<u>1.0</u>	$\Sigma =$ 15.0	
	Heat/Reflux	5.0		
	Distill MeOH	1.0		
	Cool Rxtr <50°C	1.0		
	Sample/NaOH Adjust	5.0		
	Phase Separate / Transfer	2.0		
Acidification (R-4)	Cool >25°C	1.0	$\Sigma =$ 14.7	
	Charge Formic Acid	3.0		
	Mix	0.5		
	Sample/Results	0.5		
	Transfer	0.5		
Centrifugation (R-5)	Centrifuge Batch	<u>4.6</u>		
Drying	Charge 1.5 batches	1.0	$\Sigma =$ 10.5	
	Dry Batch	8.0		
	Packout	1.5		

Note:

nn.n indicates calculated value,
otherwise value is estimated

Total Batch Time Req'd 50.1 hours

Aventis CropScience



Serge RAVET

Strategic Sourcing Manufacturing Operations
Tox Manufacturing Manager
☎: (33) 4 72 85 29 20 - Fax (33) 4 72 85 29 88

CEDAR

To the attention of Mr G. PRATT

Fax : (1) 901 884 5398

Page(s) : 3

SR/PB - 002.00

January 10, 2000

File

SUBJECT : MoU CYCLANILIDE

*CC Jim Rupp
Kevin Payne*

Dear Geoffrey,

You will find herewith comments on the MoU, this document is still reviewed by our legal department but it seems important we progress on the points indicated below :

- Replacement of CPDM by CDM in the denomination of Cyclopentan 1,1 Dicarboxylic Acid Dimethyl Ether, (as it is in the Secrecy Agreement).
- Replacement of the wording "Definitive Agreement" by "Agreement".

• 2C Product :

I remind that the estimate of our needs for the 3 next campaigns are the following :

- 1st Campaign = product available end of december 2000
- 2nd Campaign = product available end of may 2001
- 3rd Campaign = product available end of may 2002

The first campaign is sustained to the obtention of the right of importation of CDM in the US, thus it could be possible we have two campaigns in the first contract year.

Therefore, I propose that the volume of the third contract year should be the difference between 420 Metric Tons and the cumulated volume of the 2 previous contract years.

The minimum volume after the third contract year should not be precised.

SR/PB - 00/002 - 10/01/00

Page 1/3

AVENTIS CropScience, 14-20 Rue Pierre Bairoi, B.P. 9163, 69263 LYON Cedex 09

- **2D Scheduling :**

R.P. will provide Cedar with an estimate one year before Product is required and these figures will be adjusted 3 months before the Campaign.

- **2E Raw Material Usage :**

For the avoidance of any doubt,

The saving under consumption of raw materials below - 3,5 % shall be shared equally.

- **2H Waste Disposal :**

As we have now an estimation now of the waste disposal I propose :

Replacement of "Cost of waste disposal shall be for Rhône-Poulenc" by "the cost of waste disposal charge to R.P. cannot exceed 1,1 \$/ Kg of product".

- **2I Toll Fee :**

To be clarified :

- The fee of 6,5 \$/ Kg applies on all the volume of production if the produced volume is above 200 Metric Tons in a contracted year.

- The index of reference for an escalation formula.

For the avoidance of doubt, to be precised that this toll fee has already included the amortization of the capital improvement of paragraph 2F.

- **3 Schedule of ranges Date :**

3C Maintain April 1, RP to deliver a first draft of an Agreement.

- **Additional clauses to be added :**

- a secrecy clause specific to the MoU.

- a new paragraph at the end of the document to provide for the assignment or transfert to the MoU or the Definitive agreement as the case may be to any entity which may be a successor in interest to Rhône-Poulenc.

- a new clause to provide for the settlement of disputes arising out in relation to this MoU.

Please don't hesitate to call me if you need some details on these points.

Best regards.



Serge RAVET
Toll Manufacturing Manager

Custom/Specialty Project Status

24-Feb-00

Product	Customer	Engineer	Unit	Priority	Milestone	Deadline	Status
Pentabrom	Tetra	Pirigy	1	H	NA	NA	Waiting on order to resume production
Telene	BFG	Pirigy	1	M	3-Mar	1-Apr	Preparing for short notice run
Cyclanilide	Rhone/Poulenc	Guffey	1	H	26-Feb	1-Oct	Trip to RP and Huls
Y-15055	Witco	Krusling	5	H	1-Mar	15-Mar	Hazop in prep for March 15 startup
Octasol	Octel	Siebert	5	H	10-Mar	31-Mar	Waiting on info
PPS	Ticon	Siebert	5	M	25-Feb	15-Apr	Scheduling teleconference; hot oil
TA	Cedar	Siebert	5	H	1-Mar	1-May	Cost/timing for RO
Goodbuffers	Cedar	Pirigy	5	H	1-Apr	1-Jun	Final costs if purchased
2AB	Cedar	Pirigy	5	M	1-Apr	1-Jul	Mass balance, PFD
Metolachlor	Cedar	Krusling	5	H	25-Feb	1-Sep	Complete initial review, PFD
DMC	Biochemie	Krusling	NA	M	1-Apr	1-May	Initial Review
Flouro Poly	Richman	NA	NA	L	NA	NA	Waiting for info
CS-1	Richman	Guffey	Hungary	M	1-Apr	NA	Developing PFD
4 TBCH	PPG	Pirigy	NA	L	NA	NA	Proposal to PPG for pilot reactor
IPBC	Marvac	Guffey	NA	L	NA	NA	Waiting on info
Doverphos	Dover	Siebert	5	L	NA	1-Apr	Looks to be dead

Products are listed by unit in the order they will probably run. The bottom section lists those that are wildcards at this time.

To: Chris McGee
From: Kevin Payne
Date: February 25, 2000
Subject: Custom/Specialty Projects

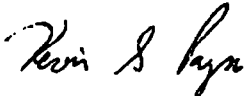
This packet is an overview regarding projects we are currently working on. I did not include those projects which do not appear likely to run this year. You will note the aggressive timelines for projects in Unit 5. It is apparent that decisions need to be made relatively quickly regarding TA, Goodbuffers, and 2AB. If they are all to be made, the startup of Metolachlor may need to be pushed back. However, the initial numbers we heard from Stanley would indicate that Metolachlor would be our product of choice.

I have moved Dover to the bottom of the list, and am considering it dead for now. I do not see how we could fit it into this year's production.

With TA requiring the high pressure reactor, and Metolachlor projections being more than our initial estimation for production capability, it would be advisable to begin looking at either Unit 5 expansion, or better, Unit 8. A Metolachlor unit would enable us to separate the herbicide and pharmaceutical use products. Unit 1 is an option for Metolachlor, but with BFG and Cyclanilide, there is not sufficient opportunity there either.

I will be back in the plant on March 6th. If you have any questions or comments, I can answer them then, or you can ask Jim Krusling, who will be filling in during my absence.

Thank you,



Kevin S. Payne

Custom/Specialty Project Status

24-Feb-00

Product	Customer	Engineer	Unit	Priority	Milestone	Deadline	Status
Pentabrom	Tetra	Pirigyi	1	H	NA	NA	Waiting on order to resume production
Telene	BFG	Pirigyi	1	M	3-Mar	1-Apr	Preparing for short notice run
Cyclanilide	Rhone/Poulenc	Guffey	1	H	26-Feb	1-Oct	Trip to RP and Huls
Y-15055	Witco	Krusling	5	H	1-Mar	15-Mar	Hazop in prep for March 15 startup
Octasol	Octel	Siebert	5	H	10-Mar	31-Mar	Waiting on info
PPS	Ticona	Siebert	5	M	25-Feb	15-Apr	Scheduling teleconference; hot oil
TA	Cedar	Siebert	5	H	1-Mar	1-May	Cost/timing for RO
Goodbuffers	Cedar	Pirigyi	5	H	1-Apr	1-Jun	Final costs if purchased
2AB	Cedar	Pirigyi	5	M	1-Apr	1-Jul	Mass balance, PFD
Metolachlor	Cedar	Krusling	5	H	25-Feb	1-Sep	Complete initial review, PFD
DMC	Biochemie	Krusling	NA	M	1-Apr	1-May	Initial Review
Flouro Poly	Richman	NA	NA	L	NA	NA	Waiting for info
CS-1	Richman	Guffey	Hungary	M	1-Apr	NA	Developing PFD
4 TBCH	PPG	Pirigyi	NA	L	NA	NA	Proposal to PPG for pilot reactor
IPBC	Marvac	Guffey	NA	L	NA	NA	Waiting on info
Doverphos	Dover	Siebert	5	L	NA	1-Apr	Looks to be dead

Products are listed by unit in the order they will probably run. The bottom section lists those that are wildcards at this time.

Task Name		February	March	April	May	June	July	August	September	October	November	December
Unit 1	Tetra Pentabrom											
	Telene BFG											
	RP Cyclanilide											
Unit 5	Witco Y-15055											
	Octel Octasol											
	Ticona PPS											
	TA/Goodbuffers/2AB											
	Metolachlor											

BFG Telene Unit 1

Expected run date: April 1 thru August

This is a product which has been successfully made already. There was a capital plan to improve the process and allow us to run two products simultaneously in Unit 1. However, due to BFG delaying its orders, there will no longer be time to implement these plans.

Key dates:

March 3rd - this is the deadline established for Jim Pirigy to become the process expert. He has until then to read, ask questions of others engineers or operators, or Geoff Pratt. After that date, he is expected to have the knowledge required.

April 1st - this is the latest date we can start Telene production and still make the number of pounds needed before we must switch to Cyclanilide production for RP.

There are no risks associated with this product. Likewise, there is no capital.

Team membership - There is no team for this product since it has been previously manufactured. However, if an order comes in, Jim will request the help of a lead operator, Production Engineer, and lab tech to insure a smooth startup.

Rhone Poulenc Cyclanilide

Unit 1

Expected run date: October 1 thru 1st quarter 2001

Key dates:

Feb 26th - Joe Mancini, David Guffey, Tony Dinculescu, and Kevin Payne will meet with RP and Huls.

April 1st - a definite process is defined and agreed upon by both parties.

April 15th - equipment is ordered

May 1st- concrete production and waste costs are generated

September 1st - raw materials arrive

October 1st - production begins

Benefits -

This product will not be a large profit generator. However, it will allow us to purchase some new equipment, will keep the unit active for several months, and maintains our good relationship with RP.

Risks -

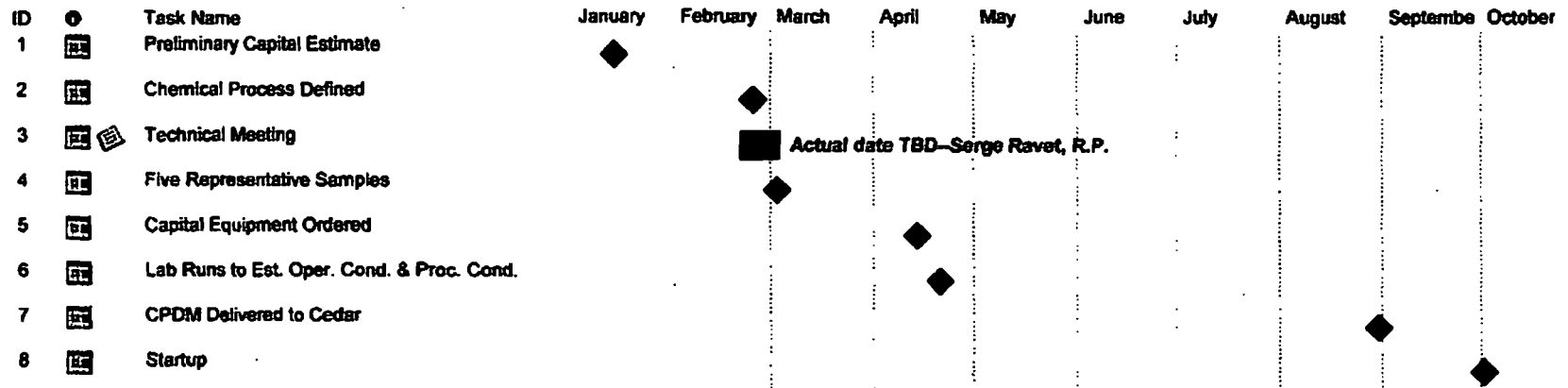
Our R&D department has found several improvements to the original process. RP must agree to these changes for us to manufacture Cyclanilide efficiently.

Capital -

Until process fully defined, difficult to say. Could range from \$750,000 to \$1.5 million.

Team membership - David Guffey, Doc Tony, Mike Reinsegar, and Greg Satterfield.

Rhone-Poulenc Cyclanilide RPA 90946 Preliminary Schedule



CK Witco

Y-15055

Unit 5

Expected run date: March 15 thru March 22nd

Key Dates:

February 25th - meeting held with production, maint.,
EH&S, and the lab to discuss.

March 1st - Hazop

March 15th - startup

Benefits -

This is a trial run of 1 batch. Total revenue will not exceed \$50,000 in all probability. However, CKWitco has many products tolled, so it is advantageous to develop a working relationship. They believe this product, and another similar, may become large quantity endeavors.

Risks -

We have no good way to distill such a small quantity. We are looking to see if an unused 500 gallon rx in Unit 6 might work. Also, the product is very sensitive to H₂O, so we must be extremely careful in handling the drums.

Team membership - Jim Krusling, Doc Bill, Stanley Herrington, and
Larry McDermott.

Octel Octasol Unit 5

Expected run date: April 3 to April 17

Key Dates:

**March 10th - By this date we need to have received
 information regard specs for water and product
 test method.**

March 20th - Source DI water, Hazop

April 3rd - Startup

Benefits-

**This is another trial, just 1 to 3 batches. However,
my impression was they would be willing to pay
a decent per diem.**

Risks -

**A new heat exchanger must be installed, and the
lab runs did not go very smoothly - product left on the
side of the rx and did not gell as well as expected.**

Capital -

Installation of the heat exchanger will cost approx \$15,000.

**Team members - Jeff Siebert, Doc Bill, Mike Reinsager, and
 Greg Satterfield**

Ticona PPS

Unit 5

Expected run dates: April 21 to May 1

Key dates:

February 25th - Scheduling teleconference

March 10th - Need a process description

March 17th - Hot oil on the vacuum dryer

April 3rd - Hazop

April 21st - Startup

Benefits -

This appears to be a fairly simple process, and good become a decent source of pounds and income in the future.

Risks -

There are still too many unknowns with project with the manufacture date getting close. The melting point of the product and the dryer temperature are fairly close(30 degrees) so problems could be encountered with hot spots. If we don't hear from Ticona in the next 2 to 3 weeks, we'll have to drop this one.

Capital -

The dryer needs a hot oil system. This should cost approx \$10,000.

Team members - Jeff Siebert, Mike Reinsager, Doc Bill

TA

Unit 5

Expected run date: May 8 to August 1

Key dates:

March 1st - A good estimate of RO system achieved

**March 8th - Decision reached on purchase or rental
of RO unit, unit ordered**

**April 8th - RO unit received; Equipment for lab ordered
if CAR approved**

May 1st - cleanup begins on unit

May 8th - startup

Benefits -

The benefits of TA production have already been determined.

The benefit of the RO water system is the ability to produce
Ultra Pure material and increase sales.

Risks -

There are several risks with this campaign. My experience
with these kinds of RO units (UV lamp required) is that they
can be very tempermental. It is important to get the unit in early
and test it. I recommend at least a service contract; it would be
preferable to sign a lease. Also, there is no guarantee that the
improved water will result in Ultra pure material. There are numerous
other potential points of contamination.

Logistics of product storage will also be difficult.

Finally, time is an issue. This is a shorter time than required to produce
a years supply, but it must be cut short if Goodbuffers and 2AB
are to be produced before Metolachlor startup. A decision will need
to be made whether to follow this plan or cancel Goodbuffers and 2AB
and extend the TA run, or postpone Metolachlor startup.

Team members - Jeff Siebert, Don Malcom, the TA QIT

Goodbuffers

Unit 5

Expected run date: August 5 to August 15

Key dates:

April 1st - A decision on purchase must be made

April 10th - Information regarding resins needed

April 17th - Cost estimates for equipment

May 1st - Decision reached regarding production; will we make it this year or not

May 21st - Assuming we decide to make it, final cost and waste numbers generated

June 1st - Equipment ordered

July 15th - Hazop

August 2nd - Unit cleanup

August 5th - Starup

Benefits -

The purchase and production of Goodbuffers will, in theory, allow us to enter more markets in TA, as well as make us a sole source provider for buffers. The purchase of the technology includes a fair inventory, which may be enough to delay production.

Risks -

Cleanliness is essential for success, and we will not have much cleanup time. Also, the purchase of Goodbuffers is supposed to include TA-HCl technology, but we have seen nothing at this point. Lack of time for production is a key issue. Finally, there is a very real risk that we will have no success in this market, nor time or location to make it in the future if Metolachlor is a success.

Team members - Jim Pirlgyi, Doc Bill, Geoff Pratt

2AB

Unit 5

Expected run date: August 22 to September 8

Key dates:

April 1st - Initial PFD and mass balance complete

April 15th - Nitro-propane process received

May 1st - PFD and mass balance for Nitro-propane

June 1st - Cost and waste numbers generated

June 15th - Equipment, if any, ordered

July 15th - Hazop

August 16th - Cleanup

August 22nd - Startup

Benefits -

2AB has been made in Unit 5 before, about 10 years ago. Nitro-propane, however, is new. This would complete the buffers family.

Risks -

Nitro-propane is a highly dangerous material. We must be very careful in handling, and have good data from the lab. Trying to rush in this fashion could be hazardous on this one.

We have located old documents on the previous 2AB process and are reviewing. We just don't have much knowledge at this point.

Capital -

Unknown

Team members - Jim Pirigyl, Doc Bill, Geoff Pratt

2AB Preliminary Schedule							
Task Name	Start	March	April	May	June	July	August
PFD and mass balance	Mon 4/3/00		◆				
Receive Nitropropane process	Mon 4/17/00		◆				
Nitro mass balance, PFD	Mon 5/1/00			◆			
Cost and waste numbers	Thu 6/1/00				◆		
Order equipment	Thu 6/15/00				◆		
Hazop	Mon 7/17/00					◆	
Prepare for run	Wed 8/16/00						◆
Startup	Tue 8/22/00						◆

Metolachlor**Unit 5**

Expected run date: September 18 to unknown

Key dates:

February 25th - Initial review complete

March 25th - Initial lab work complete

April 10th - PFD complete, 1st run at costs

May 1st - Process defined

June 1st - Equipment ordered if needed

July 1st - Final cost and waste numbers generated

August 1st - Hazop

September 1st - Ready to run

September 18th - Startup date under this plan

Benefits -

The numbers we were given makes this sound like a tremendous opportunity. The unit would need to be expanded, or Unit 8 constructed, to produce the number of pounds projected (8 to 12 million). Our initial calculation shows our capacity around 6 million/year. The unit would always be running, no dead time.

Risks -

As mentioned in the benefits, we believe expansion would be required for the Metolachlor. Certainly, if Metolachlor, TA, BFG, and Cyclanilide are all to be produced expansion will be needed.

We have just begun to develop a process, so timing is critical. We are attempting to have the process ready to start September 1, although the schedule I have developed calls for startup September 18.

Doc is researching to insure there is no Patent infringement problem.

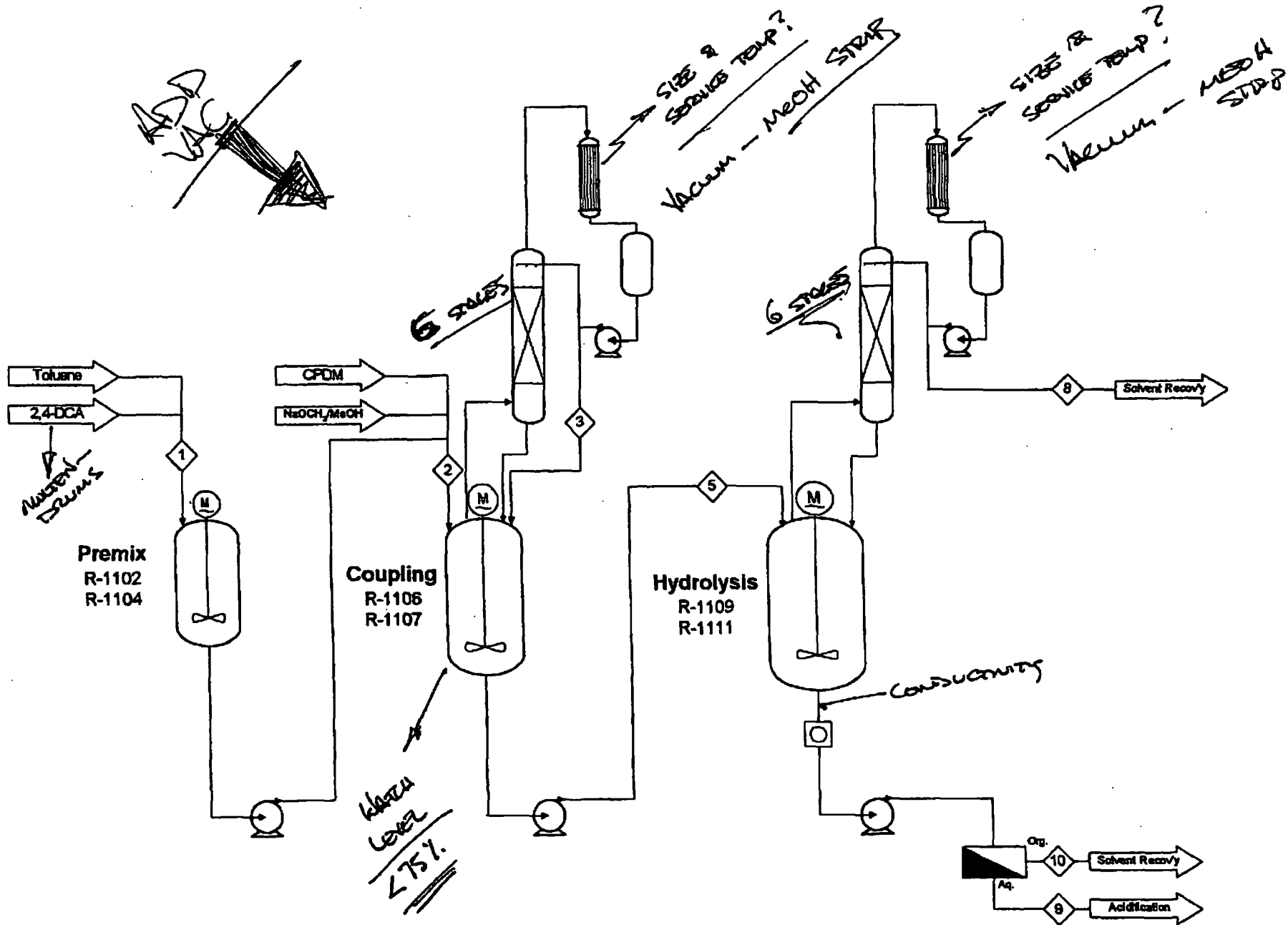
Capital -

Unknown. However, it is quite feasible that a new unit will be needed.

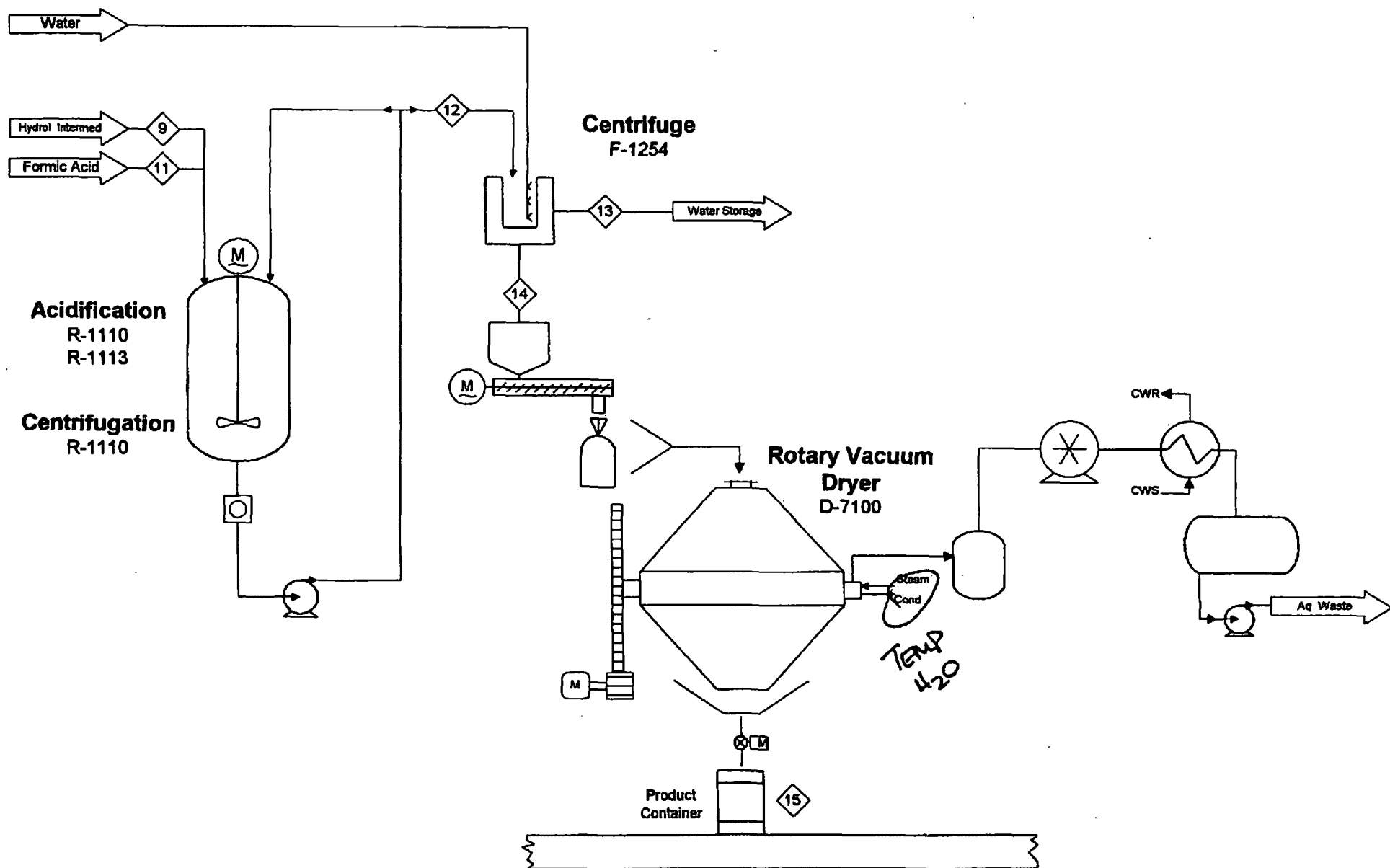
Team members - Jim Krusling, Doc Bill, and Greg Satterfield


Metolachlor Preliminary Schedule

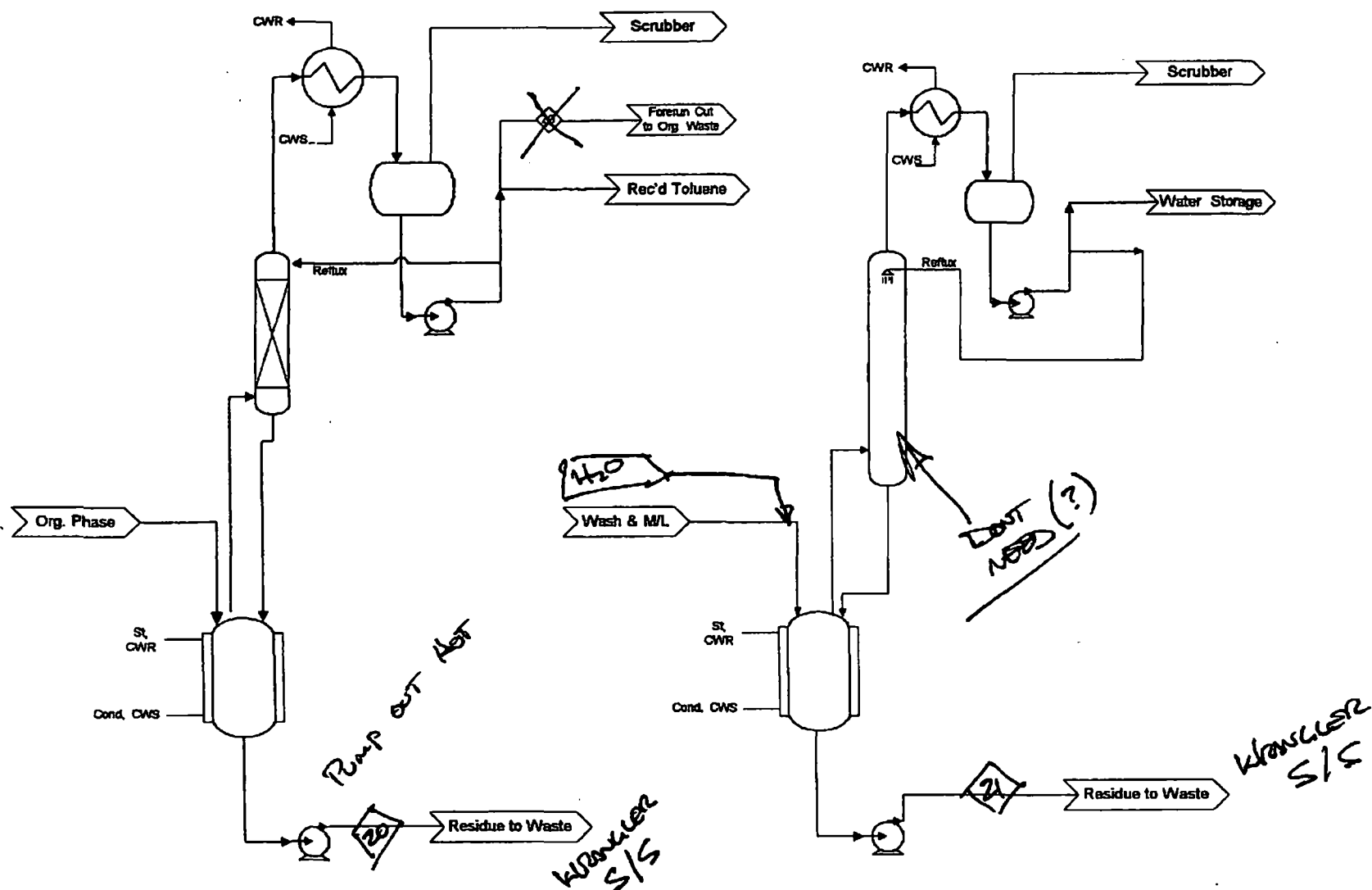
Task Name	Start	February	March	April	May	June	July	August	September
Initial review complete	Fri 2/25/00	◆							
Initial lab work complete	Fri 3/24/00		◆						
PFD, 1st cost estimate	Mon 4/10/00			◆					
Process defined	Mon 5/1/00				◆				
Equipment ordered	Thu 6/1/00					◆			
Final cost, waste numbers	Mon 7/3/00						◆		
Hazop	Tue 8/1/00							◆	
Ready if necessary	Fri 9/1/00								◆
Planned startup	Mon 9/18/00								◆



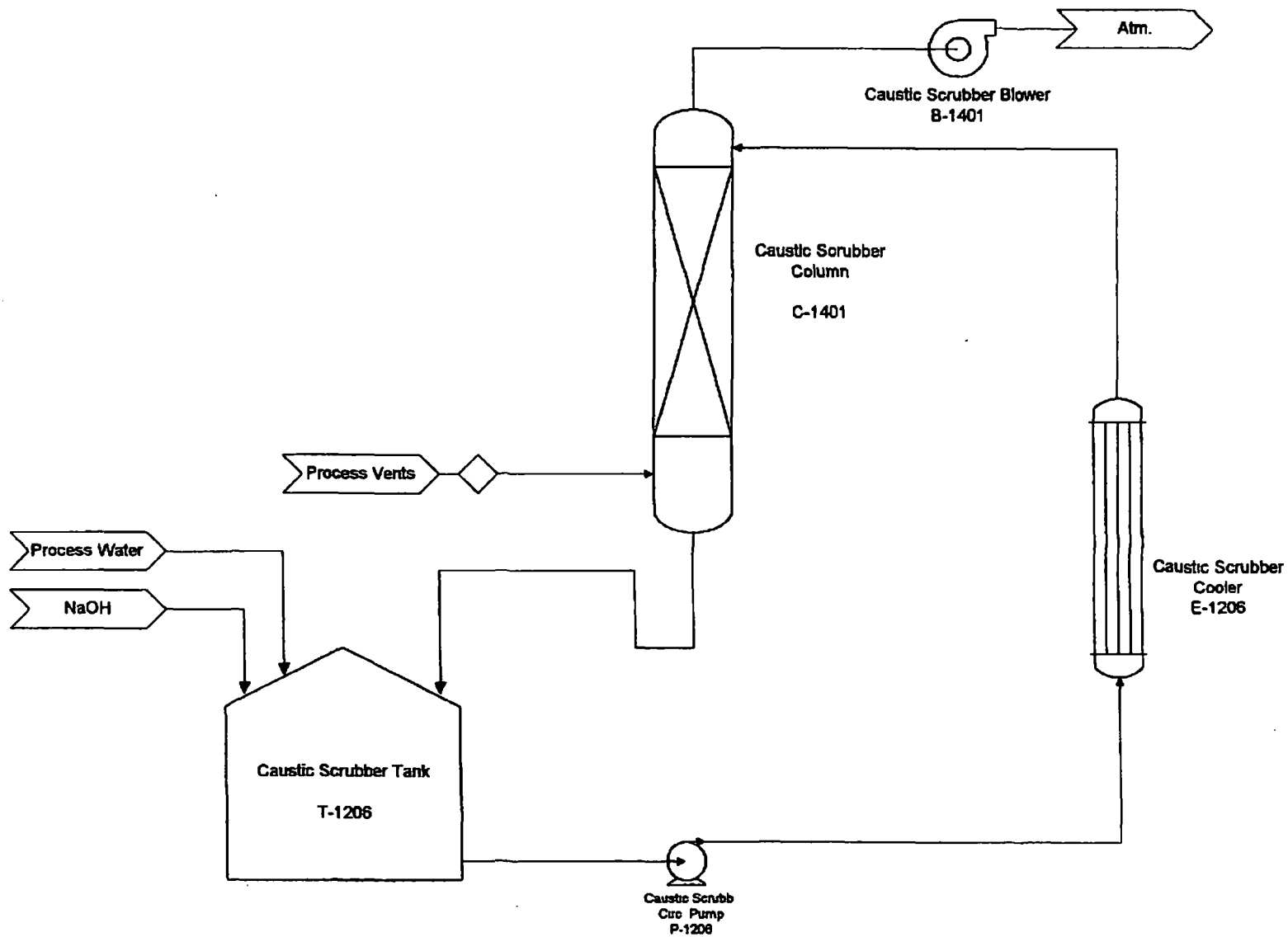
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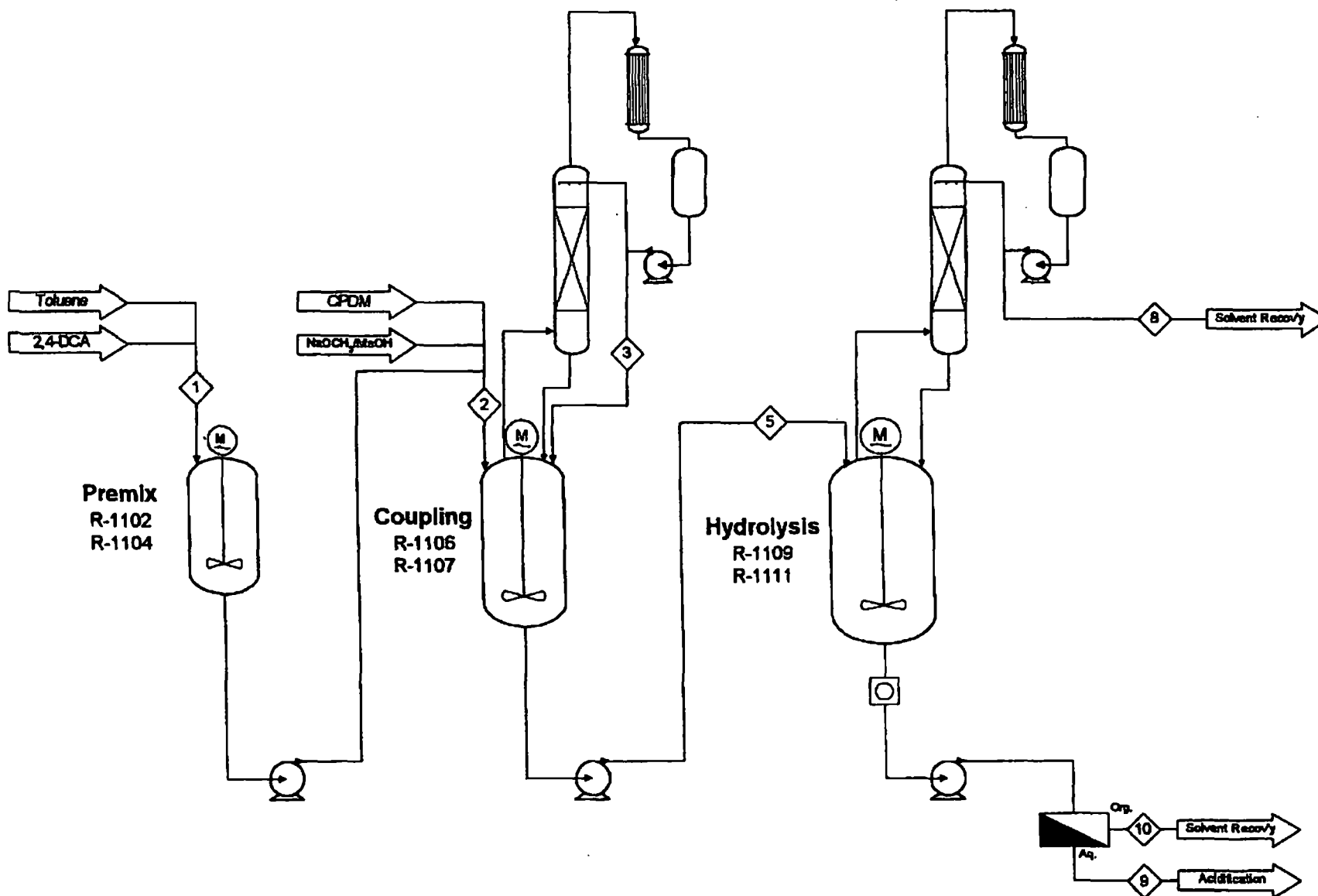
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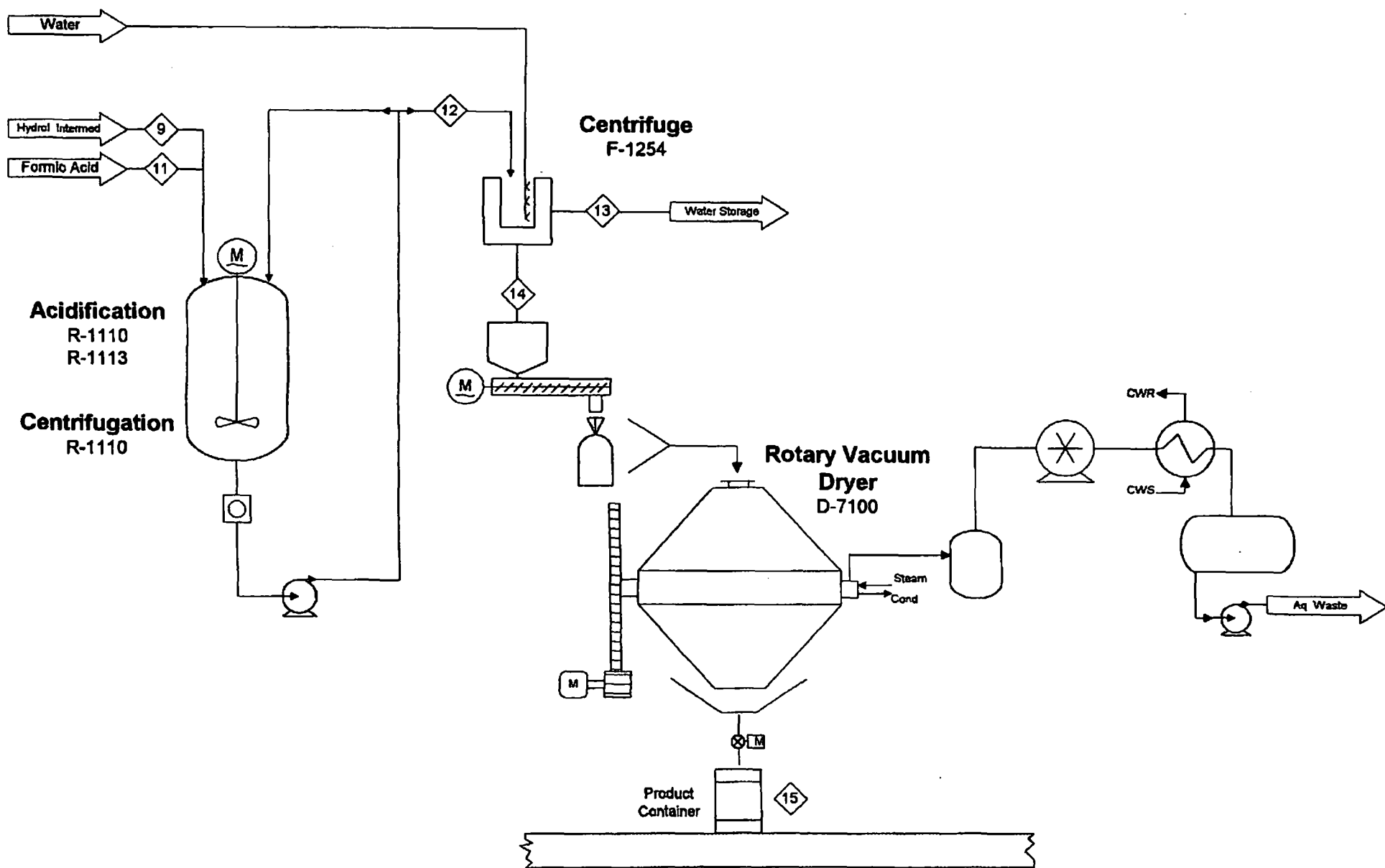
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DCG	None	02/26/00	B	




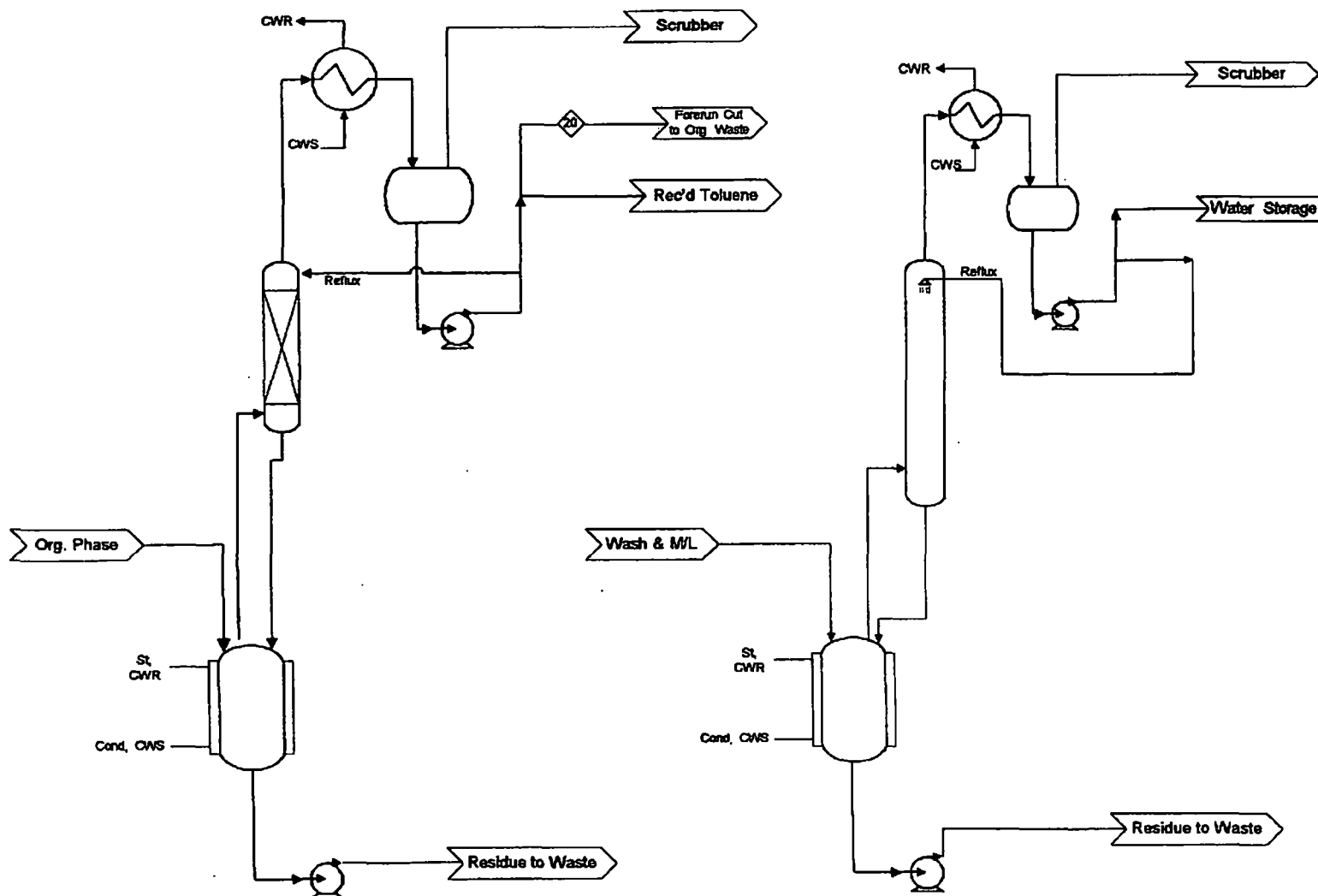
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DCG	None	02/26/00	B	




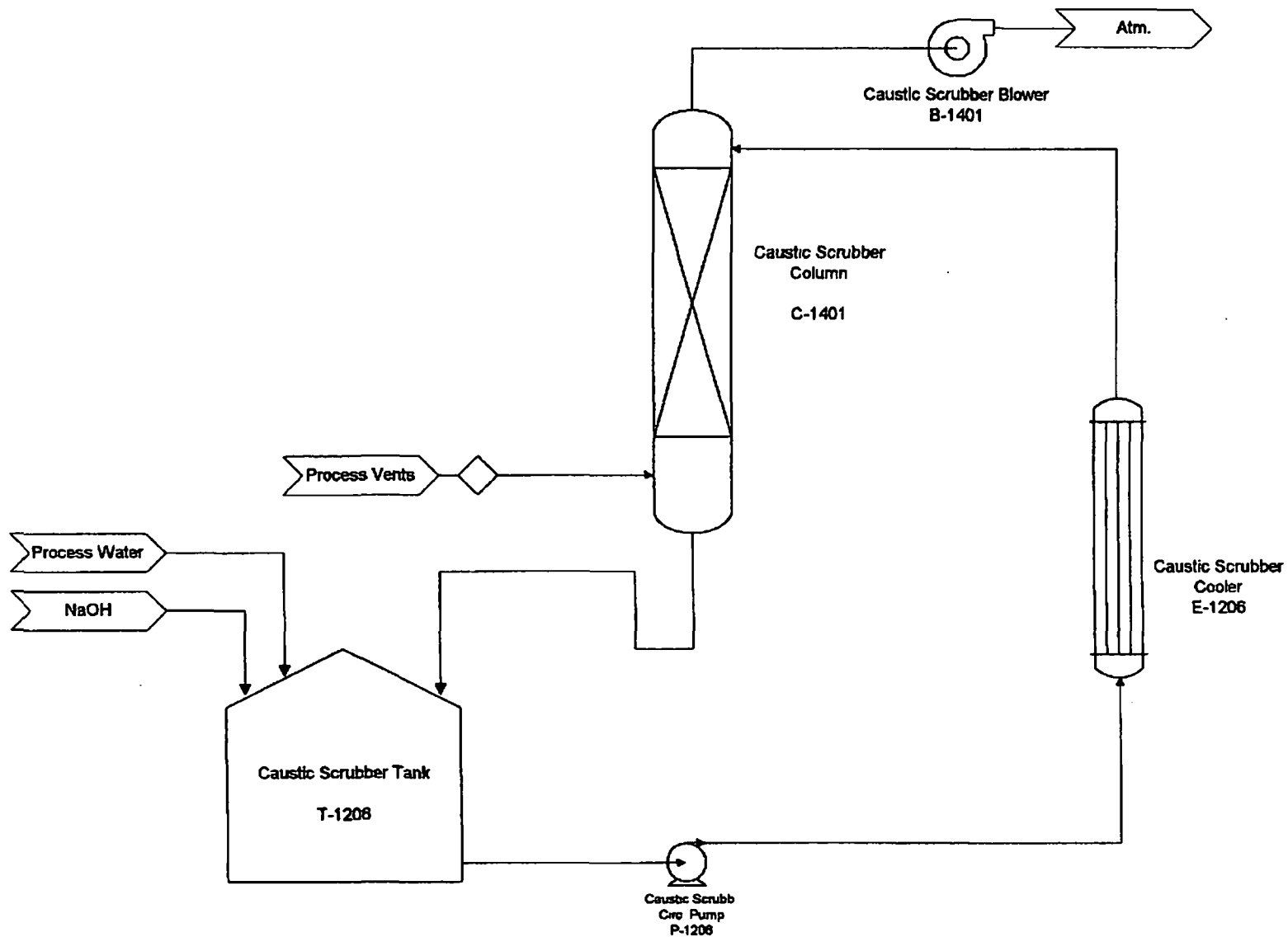
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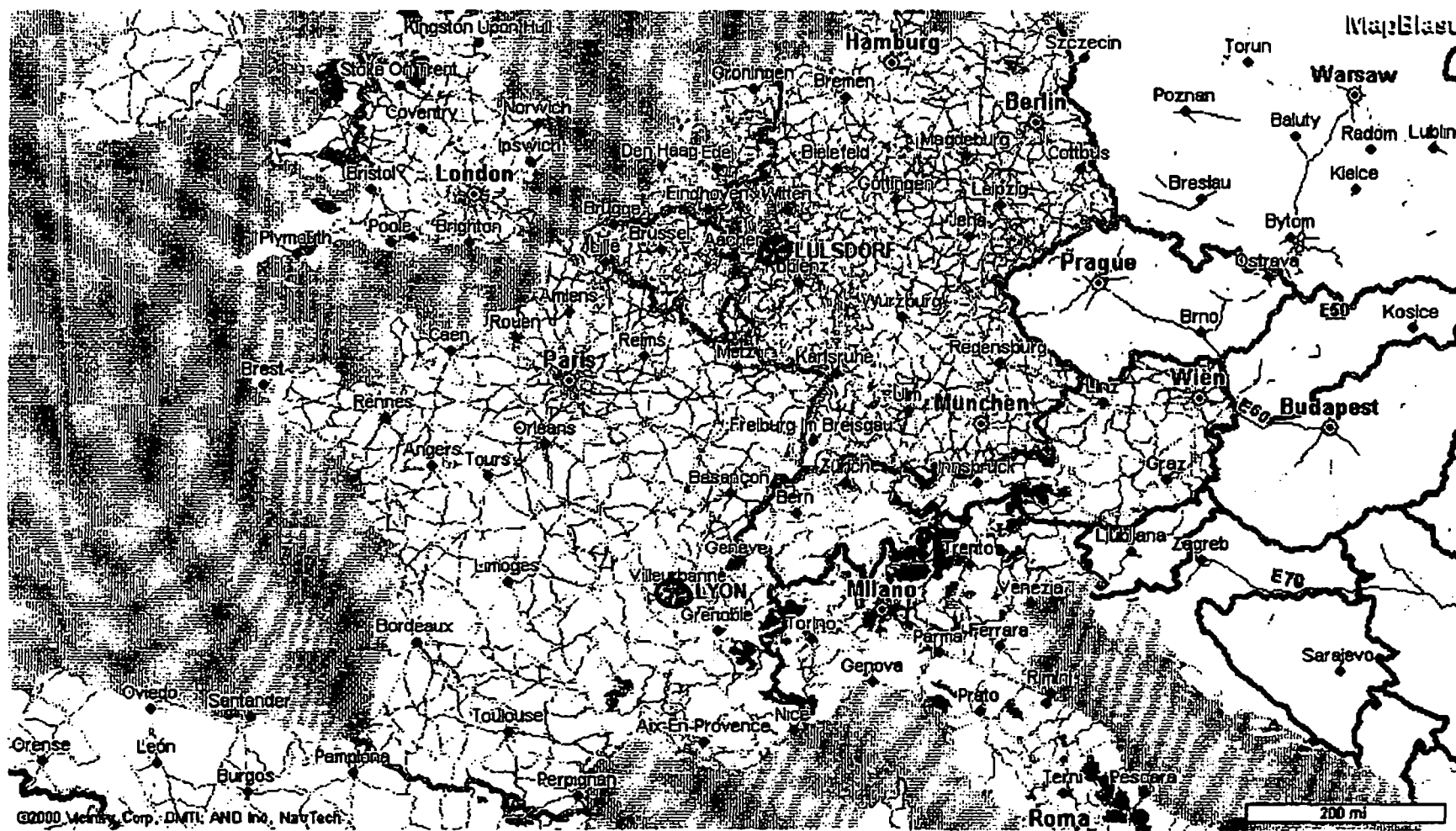


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	Page 3 of 4 Pages			
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	Title: Cyclanilide 90946 Process Flow Diagram Page 4 of 4 Pages			
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COST ESTIMATE SUMMARY

PAGE 1 of 3

PROJECT: CYCLANILIDE

DATE: 25-Feb-00

PROJECT ENGINEER: M. REINSAGER

REV.

LABOR RATE \$35.00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
1.0 SITE WORK							
DEMOLITION	2	LOT	80.00	160	\$5,600.00	\$1,500.00	\$7,100.00
PAVING		SF					\$0.00
CONCRETE		YD	15.00	0	\$0.00	\$0.00	\$0.00
DRAINAGE		LOT	80.00	0	\$0.00	\$0.00	\$0.00
EARTHWORK		YD	15.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				160	\$5,600.00	\$1,500.00	\$7,100.00
2.0 CIVIL							
FOUNDATIONS	10	LOT	40.00	400	\$14,000.00	\$5,000.00	\$19,000.00
STRUCTURAL (GALVANIZED)	30000	WT	0.04	1200	\$42,000.00	\$22,500.00	\$64,500.00
PIPE RACKS	10000	WT	0.08	750	\$26,250.00	\$7,500.00	\$33,750.00
STRUCTURAL PAINTING		FT^2	0.03	0	\$0.00	\$0.00	\$0.00
GRATING	2000	FT^2	0.20	400	\$14,000.00	\$20,000.00	\$34,000.00
SUBTOTAL				2750	\$96,250.00	\$55,000.00	\$151,250.00
3.0 REACTORS (COILED/JACKETED)							
300 GALLON GLASS		EA					\$0.00
500 GALLON GLASS		EA					\$0.00
1000 GALLON GLASS		EA					\$0.00
2000 GALLON GLASS		EA	35.00	0	\$0.00	\$0.00	\$0.00
3000 GALLON GLASS		EA	40.00	0	\$0.00	\$0.00	\$0.00
4000 GALLON GLASS		EA	40.00	0	\$0.00	\$0.00	\$0.00
COLUMN (10FT)	1	EA	120.00	120	\$4,200.00	\$7,000.00	\$11,200.00
COLUMNS (10 FT PACKED)	4	EA	80.00	320	\$11,200.00	\$80,000.00	\$91,200.00
RELOCATED VESSELS		EA	40.00	0	\$0.00	\$0.00	\$0.00
REACTOR SUPPORTS/STEEL	2	EA	110.00	220	\$7,700.00	\$3,000.00	\$10,700.00
REACTOR REPAIR/MODIFICATION		EA	110.00	0	\$0.00	\$0.00	\$0.00
VESSEL INSULATION		SF	0.70	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				660	\$23,100.00	\$90,000.00	\$113,100.00
4.0 VESSELS/TANKS							
VESSEL REPAIRS		EA	25.00	0	\$0.00	\$0.00	\$0.00
HOPPER SS		EA	40.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (2000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (6000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL GLASS (8000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (15000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (12000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
VESSEL, FURAN (6000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
API, SS (12000 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
API, SS (16000 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
API, SS (1500 GAL)		EA	60.00	0	\$0.00	\$0.00	\$0.00
MOLE SEIVE	1	EA	60.00	60	\$2,100.00	\$8,000.00	\$10,100.00
VESSEL, SS (400 GAL)	5	EA	80.00	400	\$14,000.00	\$35,000.00	\$49,000.00
VESSEL, SS (1500 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
VESSEL, SS (5000 GAL)		EA	80.00	0	\$0.00	\$0.00	\$0.00
VESSEL INSULATION		SF	0.70	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				460	\$16,100.00	\$43,000.00	\$59,100.00

COST ESTIMATE SUMMARY

PAGE 2 of 3

PROJECT: CYCLANILIDE

DATE: 25-Feb-00

PROJECT ENGINEER: M. REINSAGER

REV

LABOR RATE: \$32.00

	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
6.0 HEAT EXCHANGERS							
CARBATE (50 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE, TFE IMP. (100 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE (200 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE, TFE IMP. (500 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
CARBATE (1000 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, HAST, (1000 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, SS (50 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
TUBE/SHELL, SS (350 FT^2)	4	EA	60.00	240	\$8,400.00	\$32,000.00	\$40,400.00
TUBE/SHELL, SS (600 FT^2)		EA	50.00	0	\$0.00	\$0.00	\$0.00
COOLING TOWERS		EA	350.00	0	\$0.00	\$0.00	\$0.00
CL2 VAPORIZER		EA	60.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				240	\$8,400.00	\$32,000.00	\$40,400.00
6.0 ROTATING EQUIPMENT							
PUMPS (50 GPM)	4	EA	160.00	640	\$22,400.00	\$36,000.00	\$58,400.00
PUMPS (350 GPM)	3	EA	40.00	120	\$4,200.00	\$36,000.00	\$40,200.00
PUMPS (100 GPM), TFE LINED		EA	40.00	0	\$0.00	\$0.00	\$0.00
BLOWER		EA					\$0.00
SCREW CONVEYOR	1	EA	80.00	80	\$2,800.00	\$5,000.00	\$7,800.00
VAC PUMP, AUTO SS		EA	80.00	0	\$0.00	\$0.00	\$0.00
NAUTA DRYER	2	EA	80.00	160	\$5,600.00	\$110,000.00	\$115,600.00
AGITATOR - HAST-C		EA	80.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				1000	\$35,000.00	\$187,000.00	\$222,000.00
7.0 FILTERING EQUIPMENT							
CARTRIDGE FILTER		EA	20.00	0	\$0.00	\$0.00	\$0.00
CARTRIDGE		EA					\$0.00
FUNDA (105 FT^2)		EA	60.00	0	\$0.00	\$0.00	\$0.00
CENTRIFUGE - BASKET (HAST-C)		EA	120.00	0	\$0.00	\$0.00	\$0.00
SUBTOTAL				0	\$0.00	\$0.00	\$0.00
8.0 PIPING							
PIPING (1-2 IN), TFE/CS		LF	1.40	0	\$0.00	\$0.00	\$0.00
PIPING (3-6 IN), TFE/CS		LF	1.70	0	\$0.00	\$0.00	\$0.00
PIPING (8-12 IN), SS		LF	2.70	0	\$0.00	\$0.00	\$0.00
PIPING (1.5-75 IN), SS		LF	0.70	0	\$0.00	\$0.00	\$0.00
PIPING (1-2 IN), SS	2000	LF	1.20	2400	\$84,000.00	\$26,000.00	\$110,000.00
PIPING (3-6 IN), SS	150	LF	2.50	375	\$13,125.00	\$3,300.00	\$16,425.00
PIPING (4-6 IN), CS		LF	1.50	0	\$0.00	\$0.00	\$0.00
PIPING (1.5-75 IN), CS	300	LF	0.70	210	\$7,350.00	\$1,800.00	\$9,150.00
PIPING (1-2 IN), CS	200	LF	1.00	200	\$7,000.00	\$1,400.00	\$8,400.00
		LF	2.00	0	\$0.00	\$0.00	\$0.00
PIPING (2-4 IN), FIBERCAST		LF	2.00	0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (3/4-1 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (1-2 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - TFE LINED (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - CS (.75 IN)	40	EA		0	\$0.00	\$4,000.00	\$4,000.00
VALVES - CS (1-2 IN)	20	EA		0	\$0.00	\$3,000.00	\$3,000.00
VALVES - CS (3-6 IN)		EA		0	\$0.00	\$0.00	\$0.00
VALVES - SS (3-6 IN)	4	EA		0	\$0.00	\$2,400.00	\$2,400.00
VALVES - EXOTIC		EA		0	\$0.00	\$0.00	\$0.00

COST ESTIMATE SUMMARY

PAGE 3 of 3

PROJECT: CYCLANILIDE

DATE 25-Feb-00

PROJECT ENGINEER M REINSAGER

REV

LABOR RATE \$32 00

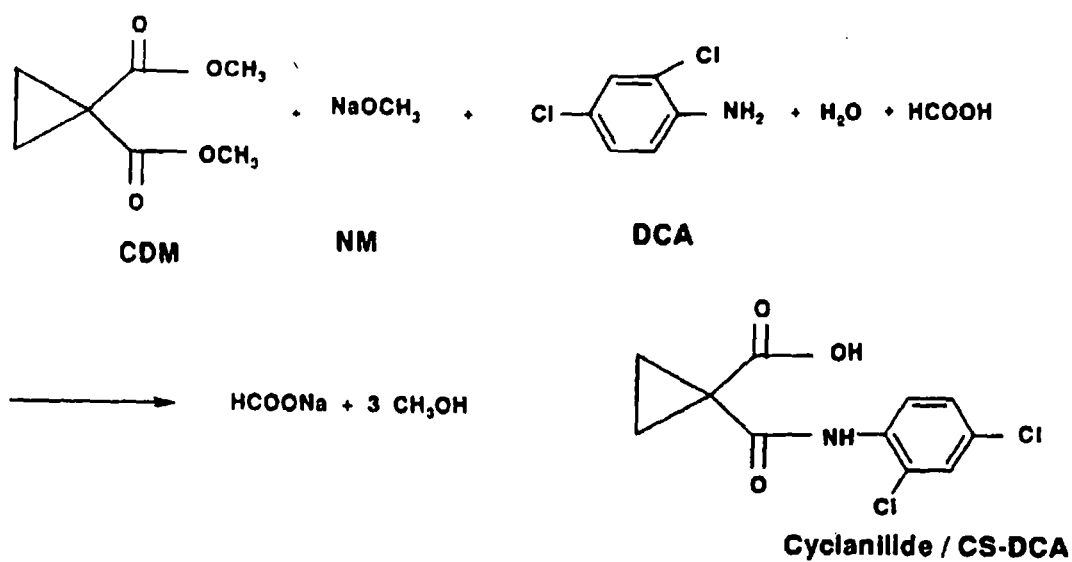
	QTY	UNIT	UNIT MH	TOTAL MH	LABOR	MATERIAL	TOTAL
VALVES - SS (1-2 IN)	32	EA		0	\$0 00	\$8,000 00	\$8,000 00
VALVES - SS (4-6 IN)		EA		0	\$0 00	\$0 00	\$0 00
FITTINGS, TFE (1-2 IN)		EA		0	\$0 00	\$0 00	\$0 00
FITTINGS, TFE (3-6 IN)		EA		0	\$0 00	\$0 00	\$0 00
INSULATION (2-4 IN)	100	LF	0 40	40	\$1,400 00	\$1,000 00	\$2,400 00
PAINTING		LF	0 20	0	\$0 00	\$0 00	\$0 00
PSV		EA	5 00	0	\$0 00	\$0 00	\$0 00
RUPTURE DISC		EA	5 00	0	\$0 00	\$0 00	\$0 00
STEAM TRACING/INS	150	LF	0 50	75	\$2,625 00	\$1,200 00	\$3,825 00
PIPING MISC (HANGERS, ETC)	5	LOT	40 00	200	\$7,000 00	\$4,000 00	\$11,000 00
HOT WATER MIXER		LOT	20 00	0	\$0 00	\$0 00	\$0 00
SUBTOTAL				3500	\$122,500.00	\$56,100 00	\$178,600.00
9.0 ELECTRIC/INSTRUMENTATION							
SCALE	1	EA	20 00	20	\$700 00	\$2,500 00	\$3,200 00
MOTOR (20-40 HP)	7	EA	24 00	168	\$5,880 00	\$10,500 00	\$16,380 00
WIRING/CONDUIT/TRAY	700	LF	0 70	490	\$17,150 00	\$8,400 00	\$25,550 00
FLOW INST (MICRO-MOTION)	4	EA	48 00	192	\$6,720 00	\$20,000 00	\$26,720 00
FLOW INSTRUMENTS		EA	10 00	0	\$0 00	\$0 00	\$0 00
PRESSURE INSTRUMENTS/CTRL		EA	50 00	0	\$0 00	\$0 00	\$0 00
LEVEL INSTRUMENTS	4	EA	42 00	168	\$5,880 00	\$6,000 00	\$11,880 00
GUAGES	10	EA	0 80	8	\$280 00	\$750 00	\$1,030 00
TEMP INDICATOR	5	EA	2 00	10	\$350 00	\$1,000 00	\$1,350 00
CONTROL VALVES	4	EA	24 00	96	\$3,360 00	\$8,000 00	\$11,360 00
PRESSURE REGULATORS	2	EA	8 00	16	\$560 00	\$1,000 00	\$1,560 00
CONTROLLERS	4	EA	12 00	48	\$1,680 00	\$3,200 00	\$4,880 00
INTERLOCKS (MINIMAL)	6	EA	10 00	60	\$2,100 00	\$1,800 00	\$3,900 00
DCS EQUIPMENT/CONFIGURATION		EA	120 00	0	\$0 00	\$0 00	\$0 00
CONTROL ROOM/MCC		EA	650 00	0	\$0 00	\$0 00	\$0 00
ELECTRICAL MISC	2	LOT	120 00	240	\$8,400 00	\$4,000 00	\$12,400 00
SWITCHES	6	EA	10 00	60	\$2,100 00	\$1,200 00	\$3,300 00
SUBTOTAL				1576	\$55,160.00	\$68,350 00	\$123,510.00
10.0 INSPECTION/ENGINEERING							
VESSEL INSPECTIONS		EA			\$0 00		\$0 00
ENGINEERING/DCS CONFIG	15	LOT	40 00	600	\$21,000 00		\$21,000 00
DRAFTING/DESIGN	20	LOT	40 00	800	\$28,000 00		\$28,000 00
SUBTOTAL				1400	\$49,000.00	\$0.00	\$49,000.00
11.0 RENTALS							
CRANE	3	LOT				\$4,500 00	\$4,500 00
EQUIPMENT		LOT				\$0 00	\$0 00
FREIGHT (ALL ABOVE)	6	LOT				\$9,000 00	\$9,000 00
12.0 MISCELLANEOUS							
LAB EQUIPMENT		LOT				\$0 00	\$0 00
SUBTOTAL						\$9,000.00	\$9,000.00
SUBTOTAL				11746	\$411,110.00	\$541,950.00	\$953,060.00
OVERTIME (50%)							
CONTINGENCY (40%)					\$164,444.00	\$216,780.00	\$381,224.00
TOTAL					\$575,554.00	\$758,730.00	\$1,334,284.00

AB0000088104

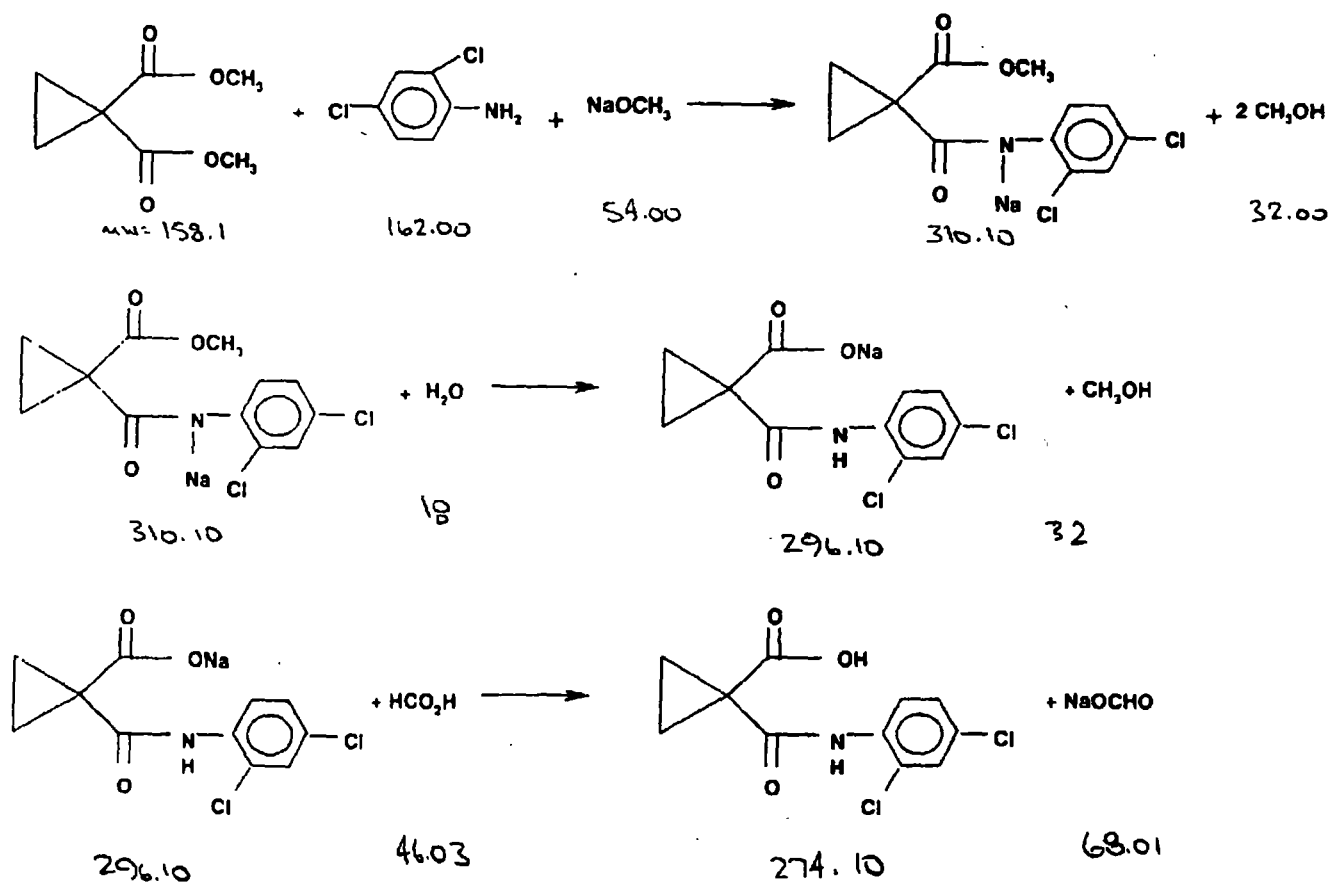
Rhone-Poulenc RPA 90946 (Cyclanilide)
Major Equipment Identification

	<u>Train A</u>			<u>Train B</u>		
<u>Service</u>	<u>Equip. No.</u>	<u>MOC</u>	<u>Capacity</u>	<u>Equip. No.</u>	<u>MOC</u>	<u>Capacity</u>
<u>Premix System</u>						
Tank	R-1102	GLS	1500 gal	R-1104	GLS	1500 gal
Agitator	A-1102	GLS	10 hp	A-1104	GLS	10 hp
Transfer Pump	P-1102B	Alloy D20	70 gpm @ 80'	P-1104B	Alloy D20	50 gpm @ 56'
<u>Coupling System</u>						
Reactor <i>REACT PUMP</i>	R-1106	GLS	3000 gal	R-1107	GLS	3000 gal
Column <i>REACT</i>	C- (NEW)	316 SS	<u>TBD</u>	C- (NEW)	316 SS	<u>TBD</u>
<i>REACT</i> Pump	P- (NEW)	316 SS	<u>TBD</u>	P- (NEW)	316 SS	<u>TBD</u>
<u>Hydrolysis and Acidification</u>						
Reactor <i>REACT PUMP</i>	R-1109	Hast-C 22	4000 gal	R-1111	GLS	3000 gal
Agitator	A-1109	Hast-C 276	20 hp	A-1111	GLS	20 hp
Column <i>REACT</i>	C- (NEW)	316 SS	<u>TBD</u>	C- (NEW)	316 SS	<u>TBD</u>
<i>REACT</i> Pump	P-1109	PFA Lined St	300 gpm @ 94'	P- (NEW)	316 SS	<u>TBD</u>
<u>Centrifugation</u>						
Feed Tank	R-1110	GLS	4000 gal			
Feed Tank Agitator	A-1110	GLS	10 hp			
Feed Pump	P-1110	316 SS	150 gpm @ 73'			
Centrifuge	F-1254	Hast-C	48"x30" P/B			
<u>Dryer</u> <i>DRYER REACT PUMP</i>	D-7100	304 SS	7 cu. Meter			
Scrubber <i>COND REACT PUMP</i>	C-1401	CS/FRP	N/A			
<u>Toluene Recovery</u>						
Still Pot	R-1112	GLS	2000 gal.			
Still Pot Pump	P- (NEW)	316 SS				
Column	C-1412	GLS	2' d x 32' P/H			
Primary Condenser	E-1412A	316 SS	141 sq. ft			
Secondary Condenser	E-1412B	316 SS	47 sq. ft.			
Receiver	V-1312	316 SS	1000 gal.			
Receiver Pump	P-1312	Alloy D4	25 gpm @ 55'			
Rcvd Tol Storage Tank	T-1222	316 SS	12900 gal.			
Rcvd Tol Storage Pump	P-1222	Alloy D4	75 gpm @ 72'			
<u>Water Recovery</u>						
Still Pot						
Column						
Condenser						
Receiver						

Overall equation:



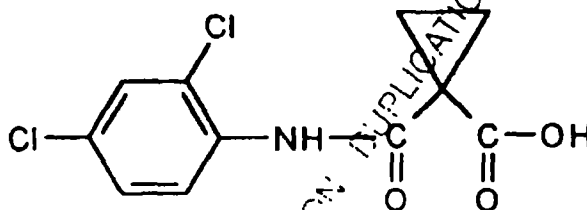
Single steps:



CYCLANILIDE RPA 90946 - MERIT NOTE

N° : 322/96/118
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Emet. : J. LAVOREL
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$C_{11}H_9Cl_2NO_3$

MW = 274,1

MERIT NOTE

Author : J. LAVOREL

Date : 19-03-96

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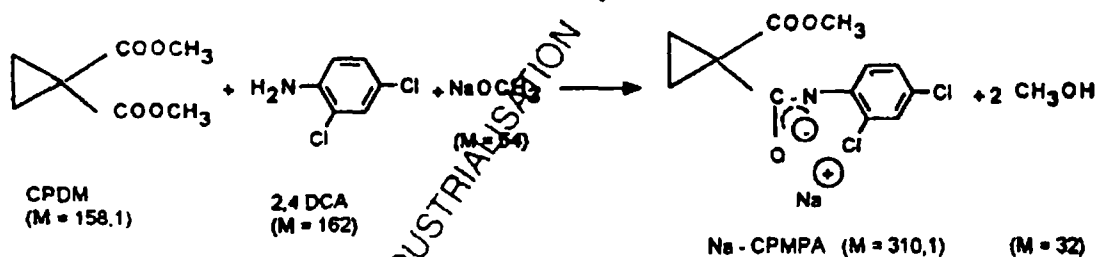
1. Process Principle

RPA 90946 is produced by a three step integrated batch process from 2,4-dichloroaniline and cyclopropane dicarboxylic methyl ester. After filtration the technical product is isolated as a white solid with a purity of $\geq 98,5\%$.

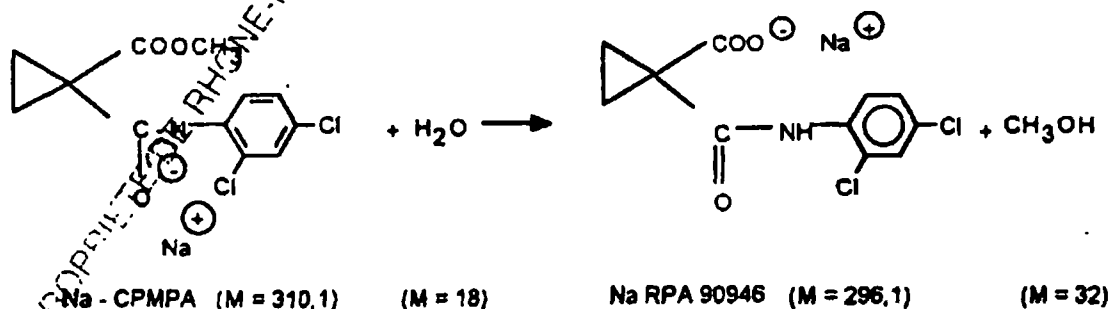
2. Chemical equations

Flow Chart of Chemical Equations for RPA 90946

Step I : Coupling



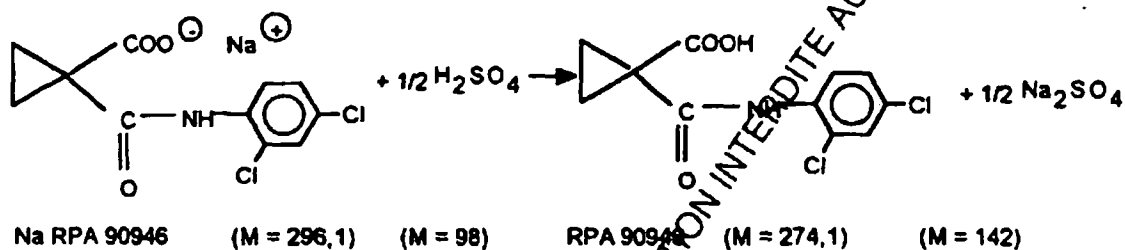
Step II : Hydrolysis



CYCLANILIDE RPA 90946 - MERIT NOTE

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Step III : Acidification



3. Raw materials specifications

N°	Chemical name or abbreviation	Molecular weight	Purity specifications		Impurities specifications	
			Minimum (% w/w)	Typical (% w/w)	Impurities	Maximum (% w/w)
1	toluene	92.15	99.00	99.50	Organic impurities Water	0.50 0.03
2	2,4-dichloroaniline	162.02	97.00	99.10	Water isomers	500 - 1000 1.00
3	Sodium methoxide 30 % w/w methanol solution	54.03	29.5	30.0	NaOH	0.5
4	cyclopropyl dimethyl carboxylate	158.10	97.0	99.0	Organic impurities	1.0
5	sodium hydroxyde	40.00	98.00	99.50	Na ₂ CO ₃ Chloride Sulfate	1.00 0.01 0.01
6	water	18.01	99.00	99.90	salts	1.00
7	sulfuric acid	98.08	95.00	97.00	Water	4.00

4. RPA 90946 final product specifications

N°	Component in Technical product	C.A.S. Number registered	Minimum content (%)	Content (%)	Maximum content (%)	Purpose in Formulation
1	1-(2,4-dichlorophenyl aminocarbonyl)- cyclopropane carboxylic acid	113136-77-9	98,5	100	96	A.I.
2	Water	7732-18-5	0,2	0,5	0	Rx. Solvent
3	Toluene <i>0.1% max</i>	108-88-3	0,2	1,0	0	Rx. Solvent
4	1-(2,5-dichlorophenyl aminocarbonyl)- cyclopropane carboxylic acid	113136-76-8	0,2	1,0	0	Rx. Imp.
5	Impurity A		0,2	0,3	0	Rx. Imp.
6	N,N'-bis-(2,4 dichlorophenyl) 1,1- cyclopropane dicarboxamide		0,3	1,5	0	Rx. Imp.
7	3-(2,4-dichlorophenyl amino carbonyl) propyl 1- (2,4 dichloro phenyl amino carbonyl) -1 cyclopropane carboxylate		0,4	1,5	0	Rx. Imp.
8	2,4-dichloroaniline	554-00-7		0,1		Rx. Imp.
9	1-(2,4-dichloro phenyl amino carbonyl)- cyclopropane carboxylic acid methyl ester					Rx. imp.
10	1-(3,4-dichlorophenyl amino carbonyl)- cyclopropane carboxylic acid	113136-91-7		0,1 0,1		Rx. Imp.

(1) C.A.S. : Chemical Abstract Service

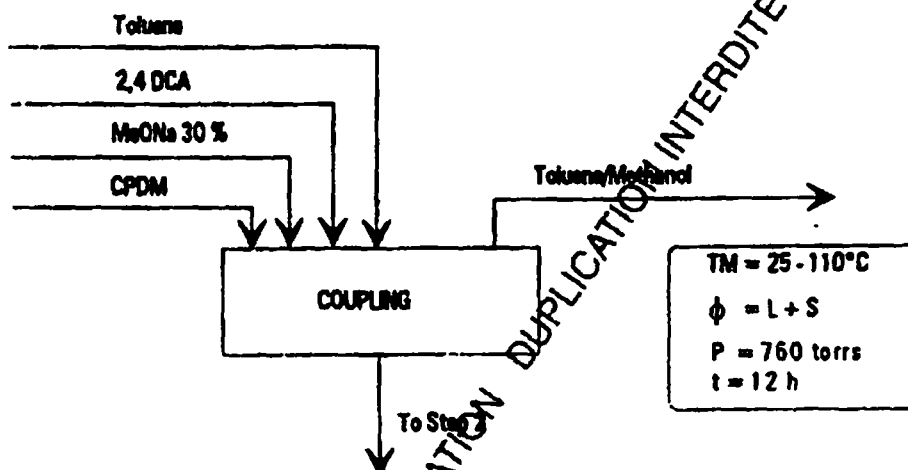
(2) Purpose definitions : A.I. : Active Ingredient; Rx. Imp. : Reaction Impurity

(3) % by weight is based upon the combination of the validated analytical methods for the analysis of the representative batches, as outlined in separate submission to satisfy SERIES 62 requirements.

5. Process description

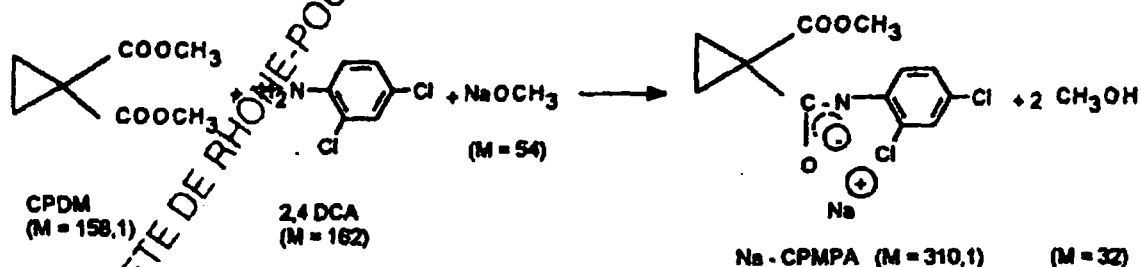
5.1 Synthesis of CPMPA : coupling reaction

5.1.1 Process diagram



5.1.2 Reaction principle

Na-CPMPA is obtained by condensation of CPDM with the Na-salt of 2,4 dichloroaniline in presence of toluene. The Na-Dichloroaniline salt is prepared in situ by reaction of Na-methylate. Complete reaction of CPDM needs a distillation of MeOH which is added with MeONa, and MeOH which is liberated during the reaction.



5.1.3 Equipement

- Glass lined reactor fitted with agitator = impeller type
- Dosing vessel for solids introduction
- Dosing tank
- Distillation column

CYCLANILIDE RPA 90946 - MERIT NOTE

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5.1.4 Loads

Product	HW g	Moles	Weight g	Volume cm
Toluene	92,14	14,9	1373	1600
2-4-DCA assay 99,4 %	162,02	1	163	
Methylate de Na 30 %				
Methanol solution	54,03	1,095	67,3	
CPDM assay 98,5 %	158,1	0,98	157,4	

5.1.5 Operating conditions

The reactor is charged with anhydrous toluene, then with 2,4 dichloro aniline, under nitrogen flow at 25°C.

When 2,4 dichloroaniline is entirely dissolved, Na methylate solution is added at 25°C.

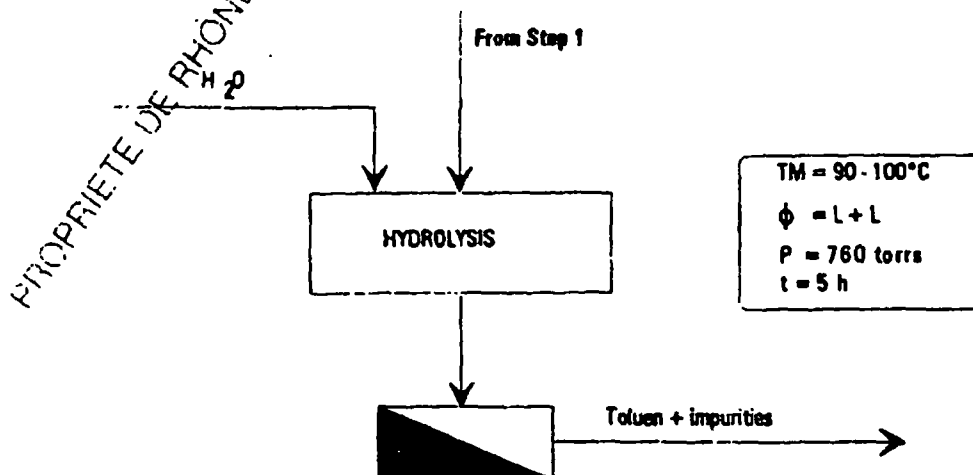
Methanol is removed by azeotropic distillation (70 % MeOH - 30 % toluene) at 64°C. Total removing of methanol needs to reach a mass temperature of 110°C.

After cooling the reaction mixture down to 20°C, CPDM is added (2 hours addition time) at 20°C.

Methanol generated during the reaction is distilled off at 25°C under vacuum. Complete reaction needs a final temperature of 110°C. Na-CPMPA precipitates in the toluene suspension.

5.2 Hydrolysis

5.2.1 Process diagram

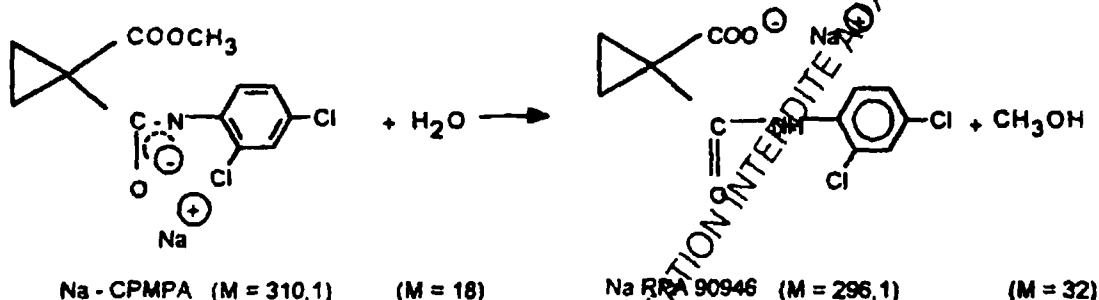


CYCLANILIDE RPA 90946 - MERIT NOTE

N° : 322/96/118 Rév. : 0
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 Emet. : J. LAVOREL
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5.2.2 Reaction principle

Water is added to the NaCPMPA suspension. The Na Salt of RPA 90946 formed is dissolved into the aqueous phase.



5.2.3 Equipment

Glass lined reactor equipped for phase separation and fitted with a distillation column.

5.2.4 Loads

Product	Mass g	Moles	Weight g	Volume cm ³
Sodium Hydroxyde	40	0,81	32,6	
Water	18,01	88,8	1800	1600

5.2.5 Operating conditions

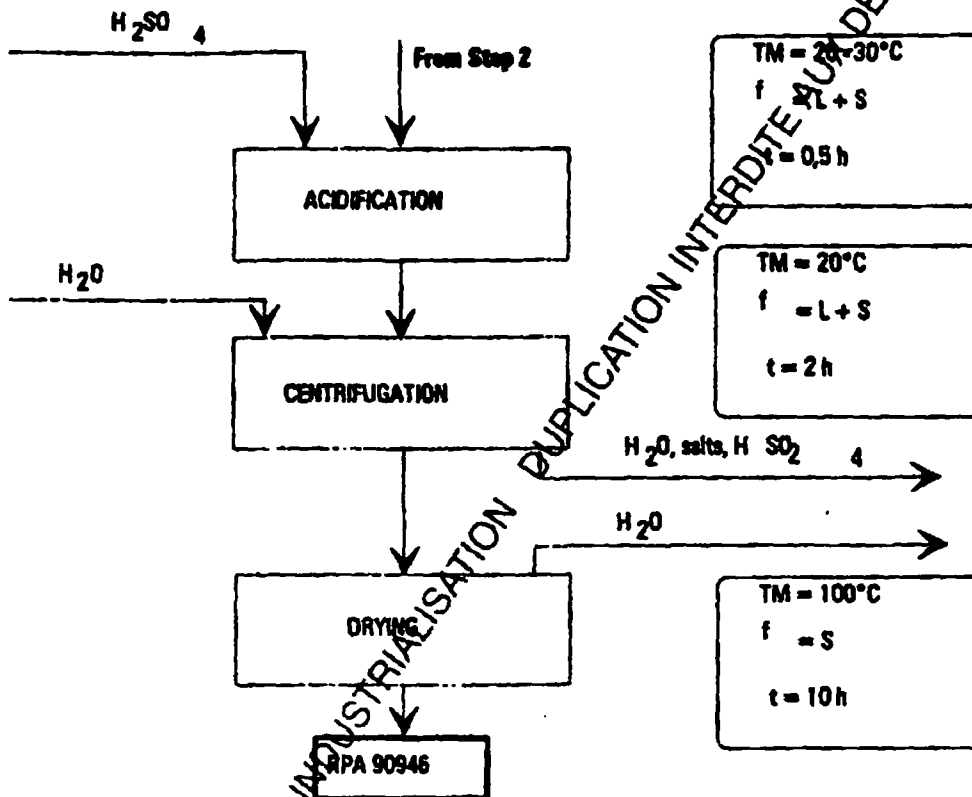
Water is added in large excess (60 moles/mole of Na-CPMPA) on the Na-CPMPA toluene suspension. Complete hydrolysis of the ester group is obtained by distilling off the methanol (duration 3 hours - T_{max} = 100°C).

After cooling to 20°C, the aqueous phase containing Na Salt of 90946 is separated by decantation from the organic phase and transferred into the acidification reactor.

Organic phase contains 2,4 DCA and Impurity n° 6 (this Impurity results from a non selective reaction of 2,4 DCA on CPDM at the step 1 ; the second ester group reacts with 2,4 DCA).

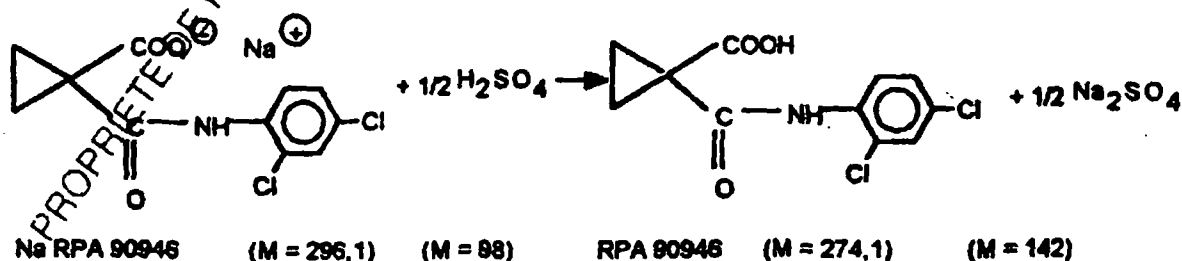
5.3 Acidification

5.3.1 Process diagram



5.3.2 Reaction principle

RPA 90946 is precipitated by acidification of the aqueous solution of Na RPA 90946. Crystals of RPA 90946 are separated by centrifugation, washed and dried.



5.3.3 Equipment

Glass lined reactor fitted with a pH probe.

CYCLANILIDE RPA 90946 - MERIT NOTE

N° : 322/96/118 Rév. : 0
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 Emet. : J. LAVOREL
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5.3.4 Loads

Produit	Conc. g/l	Volume l	Poids g
H ₂ SO ₄ 96 %	98	0,95	93

5.3.5 Operating conditions

Sulfuric acid is added on the aqueous solution of RPA 90946 salt.

The temperature is kept to 20 - 30°C during acid introduction. RPA 90946 crystallization needs a strong agitation. Acid introduction is stopped when pH < 1,5.

The RPA 90946 is recovered by centrifugation of the aqueous suspension at 20°C. Crystals are washed with water. The wet cake is transferred to a dryer and dried at 100°C;

The dry technical RPA 90946 is stored in polyethylene-lined drums and kept in a clean room.

6. Results

Yield RPA 90946 / 2,4 DCA = 92,5 %
 Yield RPA 90946 / CPDM = 94,0 %
 Purity = 98,4 %

Major impurities

RPA 090945 = 0,6 %

This impurity results from the reactions of 2,5 DCA with CPDM.

2,4 DCA = 0,17 %

This impurity results from an incomplete reaction during step 1. It may be also formed during heating of Na CPMPA and Na RPA 90946 salts (step 1 and 2) by reverse reaction.

unknown impurity = 0,15 %

CEDAR INTERNAL CORRESPONDENCE

TO: Chris McGee
FROM: E. J. White
SUBJECT: **RP's Cycanilide Process**

DATE: September 23, 1998
COPY TO:

There is not enough information to look at this process in any detail. The following comments are offered:

STEP I: Coupling

- * Don't know anything about CPDM handling
- * 2,4 DCA will have to be melted and pumped into reactor. Drums or container?
- * I assume the NaOCH_3 is a solid, which would require solids handling equipment.
- * Methanol and toluene strip should be relatively simple, R-5104 (3000 SS) is the only vessel in unit 5 that would not require installation of a condenser.
- * How will the toluene and methanol stream be disposed of?

STEP II: Hydrolysis

- * Need a sight glass on bottom discharge for phase separation.
- * May use R-5103, transfer aqueous phase (bottom layer) to R-5105 (~~no~~^{yes} agitator), transfer the organic layer to storage. The aqueous layer can then be returned to R-5103 for step III.
- * How will the toluene and impurities stream be disposed of?

STEP III: Acidification

- * Use R-5103, need an acid addition line.

STEP III: Centrifugation

- * Assume our basket centrifuge will work.
- * Waste acid and salts may have to be shipped offsite depending on makeup.

STEP III: Drying

- * Need definition of drying requirements - may need a batch dryer.
- * Is the product temperature sensitive? Can the dryer temperature be elevated?
- * How is product packaged?

Rp prefers this process for Capure due to no salt formation - easier processing

XYLONE - Strip @ 85 bar

TOLUENE - Strip @ 250 bar

Also Solvent (XYL), 2,4-DCA, QDM → then
Mixer NaOCH₃

* AGITATOR DESIGN For Capure due to precipitation
→ Anchor style

Hydrolysis Strip w/ XYLONE @ atm press. Temp 93°C water
of 83°C → side products

* MUST USE VACUUM TO maintain @ 83°C
* USE ONLY water for hydrolysis - NO caustic

* USE Formic Acid for Acidification

DCA Conversion	95%
Chemical yield	91%
Selectivity	96%
Assay	98.5%

Wastes	Conc	TOL	XYLONE	XYL w/no med
ORG:	1.845 kg/kg	1.64	1.29	0.29 kg/kg
AQ:	1.24 kg/kg	0.97	0.97	0.97

* O/H Temp - T/O only when O/H < 70°C
- Pot Temp keep < (?) 83°C

2,4 DCA SHIPS IN DRUMS

"New" AVENTIS PROCESS DESCRIPTION

300 kg (Toluene?)
200 kg 2,4 DCA

Emulsifier (-10°C)
[Heat Solv to 35°C prior to start]

Stir 2 Hours
(30 min)

↓
25-40°C

* During NaOCH_3 Charge maintain Bottoms Temp $< 60^\circ\text{C}$

→ USE 25% NaOCH_3 w/ MeOH for waste costs

* During Coupling Distillation - Bottom Temp MAX = 76°C

IF Ck BACK TO REACTOR, DON'T NEED COOLING STEP -
ck Gols REACTOR MASS

* NEED TO CONFIRM CORROSION OK FOR GLS

* 5 THEOR. PLATES MAX FOR Coupling DISTILLATION

* Anchor Agitator for RTR

* pH 13 - OK FOR GLASS?

Hydrolysis pot temp 83°C

> MAY HAVE TO USE HET C
VESSEL

Hydrolysis YIELD DROPS 1% / °C FROM $83^\circ\text{C} \rightarrow 90^\circ\text{C}$

→ ADD HMT @ 83°C HOLD FOR 3 HR - STOP NEXT
@ VACUUM

⊗ RAC GOES w/ ORG. LAYER AFTER HYDROLYSIS

- put Temporary H_2O into the H_2O Source
- Add H_2O Heater the H_2O into the EST.
- Add pH Loop to Pytr

PERFORMANCE

Conversion (DCS) 95%
Yield 91%
DELUSSA (?)

PROCESS

XYL v. Tol

5 BATCHES → Doc 62 → Doc 61
(Proc Descrip)

Spec of Final prod - Can make better,
Cannot increase quantities

op. process requires 600 m³ water 00

LAW OFFICES
APPERSON, CRUMP & MAXWELL, PLC

SUITE 2110
 ONE COMMERCE SQUARE
 MEMPHIS, TENNESSEE 38103-2510
 901 / 525-1711

FACSIMILE 901 / 521-0788

EAST OFFICE:

SUITE 100
 1701 FERRY PARKWAY
 MEMPHIS, TENNESSEE 38120-4376
 901 / 752-6389
 FACSIMILE 901 / 757-1886

CHARLES W. METCALF, 1940-1994
 WILLIAM R. METCALF, 1972-1990
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 ANSILLA A. GUNN
 SHAWN A. TIDWELL

*ALSO ADMITTED IN MISSISSIPPI
 *ALSO ADMITTED IN DISTRICT OF COLUMBIA

File
Columbia
 March 3, 2000

VIA FAX

Mr. Geoffrey L. Pratt
 Vice President
 Cedar Chemical Corporation
 24th Floor, Clark Tower
 5100 Poplar Avenue
 Memphis, TN 38137

Re: Proposed Rhone-Poulenc Agreement

Dear Geoff:

Enclosed is a new version of the Memorandum of Understanding which incorporates some of the new concepts inserted in Rhone-Poulenc's draft, but reinserts many of the substantive provisions which Rhone-Poulenc deleted. The reinserted terms (some of which I have revised slightly from our initial draft) include:

- Except for the eighty (80) ton campaign to be initiated in the fourth quarter of the year 2000, production campaigns will be for no less than one hundred fifty (150) metric tons and there will be no more than one production campaign in each Contract Year.
- The cost of the Capital Improvements would be amortized, and effectively reimbursed by Rhone-Poulenc, over the initial four hundred twenty (420) metric tons of Product purchased by it, but in any event, twenty percent (20%) of the Capital Improvements must be reimbursed by the end of the First Contract Year and an additional forty percent (40%) by the end of the Second Contract Year and the balance by the end of the Third Contract Year.

APPERSON, CRUMP & MAXWELL, PLC

Mr. Geoffrey L. Pratt

March 3, 2000

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- The toll fees will not be reduced by the amount of the "amortization fee" after four hundred twenty (420) metric tons have been purchased (a point that Rhone-Poulenc seems to be confused about).
- I pushed up the original deadlines under Article 3 to March 15, 2000.
- Any Capital Improvement costs incurred by Cedar following execution of the Memorandum of Understanding are for Rhone-Poulenc's account.

I could underscore the clauses which we either reinserted or, otherwise, revised which represent the principal difference between Rhone-Poulenc's latest draft and the enclosure. I would suggest, however, that you submit a clean draft and describe the principal differences in your letter that accompanies the draft.

Sincerely yours,



Allen T. Malone



ATM:cs
Enclosure



Facsimile Transmittal

File

To: Serge Reves	Fax: 9-011-33-4-72-85-2066
From: Geoff Pratt	Date: 03/07/00
Re: <u>MOU Cyclanilide</u>	Pages: 11
Phone: 901-684-5373	Cc: Randal Tomblin
	Joe Mancini
	<u>Chris McGee</u>
	Allen Malone

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Dear Serge,

I offer the following comments on your fax of February 11, 2000 regarding the Cyclanilide MOU:

Your word is acceptable for all paragraphs up to and including article 2A. We note that you have extended the term from 3 years to roughly 3.5 years but this probably will not affect the timing of revenue to Cedar significantly.

In articles 2A, B, C, F, I and 3B you have changed the business terms significantly, all to your advantage. The business terms were clearly defined and agreed to in our meeting of October 13, 1999. At that time Cedar compromised between our normal and reasonable charges in the spirit of meeting your cost requirements. Your latest proposed language requires Cedar to invest over 1 million dollars and reserve our plant for you with no commitment from Aventis for quantity of product or timing. I do not believe that you would agree to such a proposal if our roles were reversed. Let us please get back to the original business agreement so that project can move forward.

Cedar Chemical Corporation

I would remind you of the basis for our original agreement:

Cedar's economics are based upon your statement that volumes would be 80MT in year 1, 160MT in year 2, 180MT in year 3.

Cedar's pricing is: \$8.00/ kg for the first campaign, which is expected to be 80MT, \$7 / kg for subsequent campaigns between 150-200 MT, and \$6.5 / kg for campaigns over 200 MT. These campaign lengths were priced in response to your request. These campaigns are to be continuous. If you anticipate that campaigns will be shorter then Cedar will estimate pricing for shorter campaigns.

Let us assume that Cedar spends funds for detailed design of the plant modifications and for the additional equipment required. If Aventis cancels the project for any reason Cedar will have to absorb the cost with no hope of return. We are prepared to absorb as the cost of doing business, expenditures associated with the generation of business, and preparing preliminary design packages and quotations. Expenditures for detailed engineering and equipment, which need to begin soon, will not begin if you cannot agree to cover costs if the project is stoppage is terminated by Aventis prior to startup.

After startup Cedar can earn a reasonable return on the capital investment only if Aventis takes the 420MT that you told us you wanted. All of the economics were based on the volume and timing projection provided by you. However, we recognizes that you cannot predict the future and Cedar is prepared to share the risk by not requiring a take or pay contract for the product. We must partially protect ourselves by requiring that the capital cost be returned to us if, for no fault of Cedar's, less than the amount of product upon which the economics were based is purchased. We use the amortization method to accomplish this. We divide the capital cost by the number of product units upon which the economics are based, in this case 420,000kgs.

Aventis will pay amortization only on the difference between the amount of product you take and 420MT. The last sentence of article 2C provides insufficient protection for Cedar. If you take very little product in the previous contract years Cedar would have to wait over three years to get most of the capital returned.

Your assumption that the fees will be reduced by the amortization amount when the 420 MT is taken is not valid. The fees do not include the amortization amount. If they did Cedar would show no profit on the project. The fees do include depreciation of the capital over 10 years.

Articles 2D, E, G, H, J, 3A, C, D, 4, 5, 6 are ok.

Attached is a new MOU which contains our thoughts on dealing with the above issues. We must reach agreement on these business issues soon or the project will be delayed. It does not make sense to begin preparation of a contract until the business basis is agreed upon. Please let me have your thoughts on how to resolve these differences.

Regards,

Geoff Pratt

